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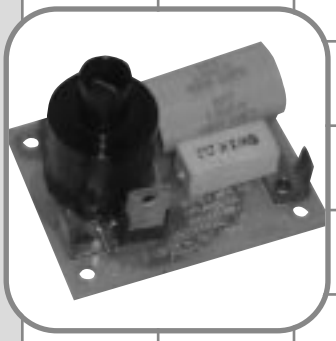

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At **PHP** we understand the importance of technical service support. Our Technical Service Manual is a comprehensive 296 page manual to assist you with the most up-to-date technical information available for heaters, generators and rental equipment.

New and exciting features in this catalog include:

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Service Manuals

Desa, Reddy, Master, Remington, Dayton

Part No.	Description
079337-01	Low Pressure Oil Fired Heaters
FA2244	350 & 600K BTU Heaters
375	375K BTU Propane Heaters
GM70108	Low Pressure Propane Heaters
104655-01	H.S.I. Service Manual

Toro, Porta Heat, Gilson, Lawn Boy

Part No.	Description
SM150*	Low Pressure Oil Fired Heaters
SM220*	Variable & 220 Oil Fired Heaters
SM230*	Air Scoop Heaters
SM320*	320 & 650K BTU High Pressure Heaters
492-420I*	Toro Heater Service Manual

SM70106 Low Pressure Service Manual - This 160 page service manual developed by PHP covers all three manufacturers of low pressure oil fired heaters (Desa, Toro, Scheu).

GM70108 Gas Fired Service Manual - New service manual! Gives an understanding of gas fired heaters, parts description & photos and troubleshooting. It also covers three manufacturers of gas fired heaters (Desa, Scheu, L.B. White).

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Ground Time-in-Transit Map From Valparaiso, IN 46383

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Oil 217
Gas 223

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Gas 200

Pro Temp (Heat Hog)
Oil 102
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Oil Heater Service Information

This section is designed to give you the information you will need when you service your customers' heaters. You will find useful information including test procedures for split phase motors and trouble shooting for various heaters.

The information contained in this section has been compiled using techniques that have been proven and tested in the field.

PHP recommends that these tests and procedures be performed by a certified technician or mechanic. Some of the tests and procedures may be dangerous should they be performed inaccurately or carelessly.

Use common sense in handling anything with electrical current or that has exposed moving parts when performing tests or procedures. Always wear proper safety equipment, such as safety glasses and gloves when necessary.

If you have questions, contact the PHP technical service department at **800-362-6951 ext. 2 or email us at techservice@portableheaterparts.com.**

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Oil Fired Heaters

General Precautions

Direct–fired forced air heaters

Direct-Fired means that all of the combustion products enter the heated space. Even though this heater operates very close to 100 percent combustion efficiency, it still produces small amounts of carbon monoxide. Carbon monoxide (called CO) is toxic. We can tolerate small amounts, but not a lot. OSHA says that 50 parts per million (ppm) in the air we breathe is okay if it does not average more than that during an 8 hour working period. Regardless, CO can build up in a heated space and failure to provide adequate ventilation could result in death. The symptoms of inadequate ventilation are:

- headache
- dizziness
- burning eyes and nose
- nausea
- dry mouth or sore throat

So be sure to follow advice about ventilation in these operating instructions.

Forced air means that a blower or fan pushes the air through the heater. Proper combustion depends upon this air flow; therefore, the heater must not be revised, modified, or operated with parts removed or missing. Likewise, safety systems must not be circumvented or modified in order to operate the heater.

Preparation/Tools Required

Low Pressure Oil Heaters have many small parts: Start by making a clean work area. This will give you an area to layout the disassembled parts. Gather the tools required before work is started. You will need the following: 1/4" and 5/16" Nut drivers, 1/8" Allen wrench, common size open end wrenches and screwdrivers, 0-15 PSI Pressure gauge (HA1180), flashlight, oil drain pan, .001 to .1 Feeler gauge, AC250V/RX1 Volt/Ohm meter,and a few gallons of fresh clean kerosene.

In addition to the tools mentioned above, every shop should have an HA1170 Tester. It is equipped with a three-position switch (off, solid, flashing) for a red LED and a set of alligator clips.

The HA1170 Tester is designed to take the guess work out of repairing HSI heaters. The HA1170 Tester will troubleshoot HSI photocells and Ignition Control Boards. It is an essential tool when telling the difference between a good part and a bad part in HSI heaters. Specific instructions on using the HA1170 Tester are found in the Photocell Section and the Ignition Control Board Section. The HA1170 Tester can also be used to test components for a heater with solid state ignition, making it more practical to own.

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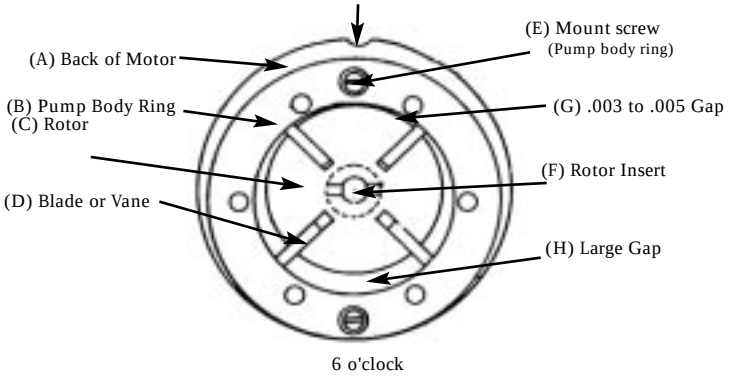
Oil Fired Heaters

Component Description and Operation

Air Pump

The heater's air pump consists of a rotor (c) with four carbon blades (d) rotating inside a pump body(b). The rotor is driven directly by the motor (a) and is attached to the motor shaft by means of a plastic insert (f). As the motor rotates, the carbon blades travel outward rubbing against the inside surface of the steel pump body (d). The rotor's position inside the pump body is such that it is off centered with the pump body and a .003/.004 of an inch gap is set at the uppermost quadrant (g). As the motor rotates, the air between the blades (h) is compressed and routed to the nozzle through the air line.



Air Filters

The air filtering system consists of an air input filter and air output filter. The air input filter is located at the right rear of the motor and its purpose is to filter all incoming air prior to entering the air pump.

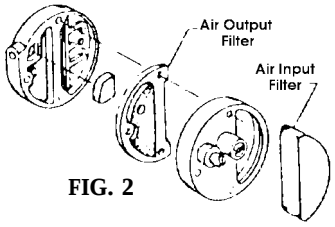


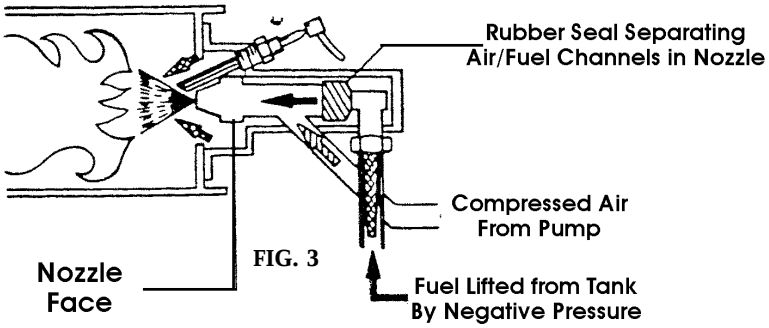
FIG. 2

The filter design is such that it can be cleaned in a mild, soapy solution, thoroughly dried and used over again.

The air output filter is located under the plastic end cover. This filters purpose is to prevent any carbon dust (from rotor or blade wear) from entering the air passages in the nozzle. This filter is non-cleanable and should be replaced when considerable build-up of carbon dust is observed.

Nozzle

As mentioned previously, the purpose of the air pump is to compress air and deliver it to the nozzle. The compressed air, as it travels through the nozzle, creates a negative pressure and lifts the fuel from the fuel tank. The fuel from the fuel tank and the compressed air are mixed at the nozzle which results in a very fine mist of fuel being sprayed into the combustion chamber. The air pump/nozzle combination eliminates the need for a conventional type fuel pump. It is important for the service technician to understand the nozzle operation. In many cases concerning improper operation of a heater, the problem is the result of a seal leak or a restriction (dust/dirt) being present within the nozzle. It should also be pointed out that each model heater requires different nozzles due to different fuel flow rates.


Rubber Seal Separating Air/Fuel Channels in Nozzle
Compressed Air From Pump
Nozzle Face
Fuel Lifted from Tank By Negative Pressure
FIG. 3

Combustion System (Burner Head)

The burner head is mounted to the rear of the combustion chamber. The purpose of the burner head is to meter and mix the amount of air entering the chamber to obtain proper combustion characteristics. The nozzle is mounted in the chamber from the burner head and is surrounded by fins, so that the amount of air entering the chamber from the burner head is equal and balanced. The size of the slots in the burner head differ between models.

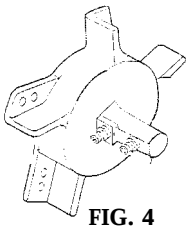


FIG. 4

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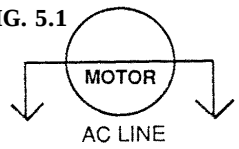
Oil Fired Heaters

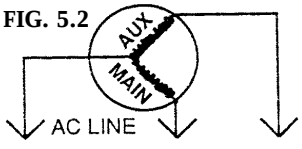
Component Description and Operation

FIG. 5.1



SHADED POLE MOTOR

FIG. 5.2



SPLIT-PHASE MOTOR

Motors

The motors used on the low pressure heaters are fractional horsepower motors ranging from 1/35 HP on the smallest heaters to 1/4 HP on the largest heaters. The motors used can be grouped into two categories. The first category is the shaded pole motor(FIG. 5.1). The shaded pole motor contains a single winding and does not require an external start relay for operation. These motors are used on the smaller heaters (30,000, 35,000 & 50,000 BTU) and are easily identified by observing that only two wires (usually red and white) are necessary for operation.

The second category is the split-phase motor(FIG. 5.2). This motor contains two separate windings. The first winding being the auxiliary or start winding and the second being the main or run winding. This motor requires an external means of switching the power off to the auxiliary winding after the motor reaches a predetermined speed. This power off switching is accomplished by a motor start relay or solid state relay. These motors are identified by observing that three wires (black, red and white) are routed from the motor.

Motor Relay

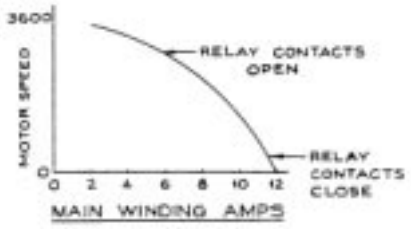
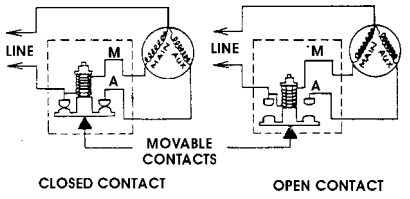
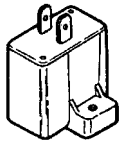


FIG. 6



The motor start relay is used to de-energize the start winding on split-phase motors. As mentioned in the *Motor Section*, remember that split-phase motors have both an auxiliary (start) and a main (run) winding. For proper motor operation, both the auxiliary and main winding are energized during start-up. After the motor starts and reaches approximately 80% of rated speed, the auxiliary winding must be de-energized to prevent overheating. This is accomplished by the use of a motor start relay. The operation of the relay functions because the main winding amperage decreases as the motor speed increases. The coil of the relay is wired in series with the main winding. The contacts of the relay are in series with the auxiliary winding. When voltage is applied to the motor, the high inrush current through the main winding creates a magnetic force in the relay coil and closes the contacts of the relay, which energized the auxiliary winding. As the motor speed increases, the current through the relay decreases and the contacts open, with gravity, de-energizing the auxiliary winding.

Solid State Relay (Applicable models use 097061-01 Solid State Relay)



The solid state relay is used to de-energize the start winding on split-phase motors. As mentioned in the *Motor Section*, remember that split-phase motors have both an auxiliary (start) and a main (run) winding. For proper motor operation, both the auxiliary and main winding are energized during start up. After the motor starts and reaches approximately 80% of rated speed, the auxiliary winding must be de-energized to prevent overheating. This is accomplished by the use of a solid state relay. The operation of the relay functions as a positive temperature coefficient resistor. When voltage is applied to the motor, the main and auxiliary windings are energized as current flows through the solid state relay which is connected in series with the auxiliary winding only. The resistance is increased over time in the solid state relay where it eventually rises to the point theoretically no current flows, de-energizing the auxiliary winding.

Safety Control

The safety control circuit consists of a photocell (light sensitive cell) and a safety control. The photocell is used to sense the presence of light inside the combustion chamber. The photocell varies its electrical resistance in relation to the light rays which contact its surface. When the heater is operating properly, the photocell sees sufficient and the proper color light, which keeps its resistance low. When the photocell does not sense the proper color or amount of light, the resistance of the photocell increases and ceases current to flow to the solid state trigger circuit, which in turn sends current flows into the circuit breaker and heats a (bimetal) bar causing the bar to warp. The warpage releases the spring loaded reset button, which brakes all power to the heater. As a service technician, it is important to understand the operation of the safety control. In the past, it has been the single most misdiagnosed part of the heater. It is suggested that all controls be checked per instructions listed in the *Troubleshooting Section*, prior to replacement.

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Oil Fired Heaters

Component Description and Operation

Desa Spark Plug

The spark plug is the igniter for the fuel. The electrical energy from the ignition transformer causes a spark to jump across the gap between the electrodes of the spark plug. The proper spark gap is shown in FIG 7.

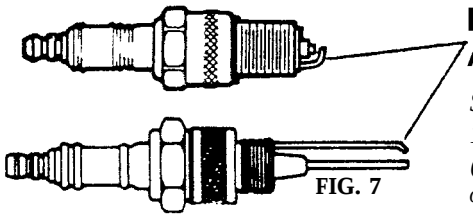


FIG. 7

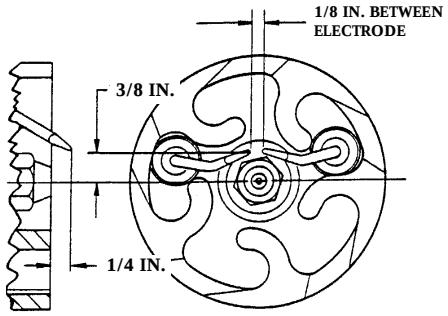
Spark Plug Gap—.050 inches or 1.27 Millimeters
(For single post electrode use 1/16" gap or .063)

Spark plugs suffer from a number of maladies including dirty electrodes, gap wear or erosion, cracked ceramic, etc. Spark plugs should be inspected frequently and replaced
periodically if faulty. Some heaters use two independent electrodes. Independent electrodes also require proper setting (FIG. 8)

Electrode Settings

Models:

B80 & B99	75,000
B120	120,000



Models:

B100	100,000 BTU
B125	125,000 BTU

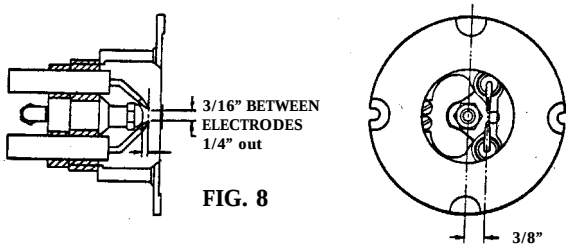


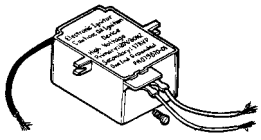
FIG. 8

Electric Igniter

(Applicable models use 079870-01 or 102482-01 Electronic Igniter)

The electronic igniter operates on 120V60 Hz. It delivers approximately 15,000 volts average to the spark plug causing the kerosene sprayed from the nozzle assembly to ignite. The igniter operates on a pulse basis. The igniter has no internal service parts and must be replaced when found defective.

Note: It is important for the service technician to be cautious when working with the electronic igniter due to its high voltage output.



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Oil Fired Heaters

Component Description and Operation

Toro Spark Plug

The spark plug must be positioned all the way in against the housing; line up the red line of the spark plug with the casting line on the burner. Gap the spark plug to .062"(FIG. 9). If plug is fouled, clean or replace.

Test spark plug by removing top cover, remove air gauge plug, loosen setscrew and remove spark plug from the burner. Leave the wire attached to the spark plug and lay the plug across the sheet metal of the heater. Loosen setscrew and remove fan blade, plug in the heater and the spark should jump continuously across the electrodes.

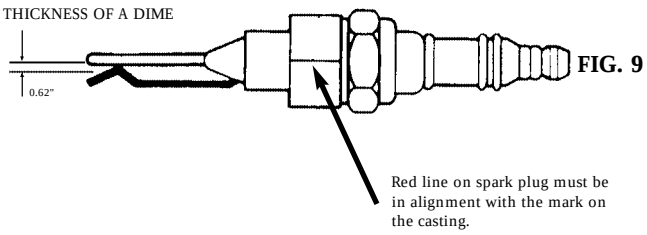

FIG. 9

Important: Spark plug is secured in burner casting with a setscrew only. Burner casting has no threads. Do not "unscrew" spark plug to remove.

Fuel System (Fuel Filters)

There are several types of fuel filters used on different model heaters. The filters are always located in line with the fuel pickup tube (FIG. 10). The purpose of the filter is to eliminate the possibility of dirt, dust, etc. from entering the nozzle and restricting the flow. The filters should be inspected and cleaned whenever a heater is brought in for service. It is also important that the bottom of the tank be inspected for sedimentation or dirt build-up. The filters design is such that a possible restriction in the filter screen can be present during operation and be dislodged back into the tank when the heater is shut off.

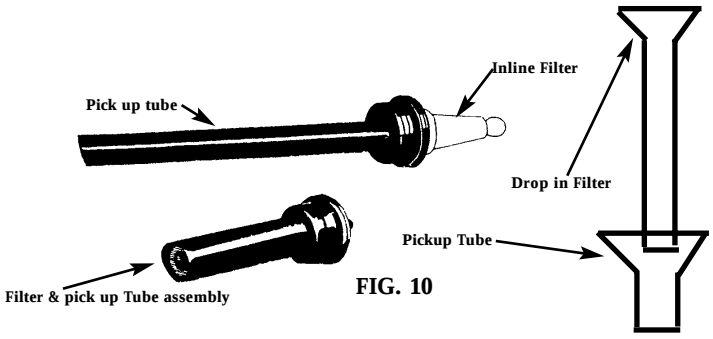

FIG. 10

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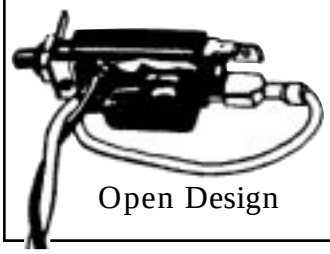
Desa Common Safety Controls

Flameout Safety Controls

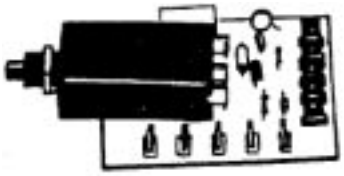


Open Design

If you have this
Old part no. M30719
or M28898-03 . . .

. . . the replacement part
is Part #HA3003

Enclosed Design



Printed Circuit Board

If you have this
Old part no. M51060-03
or M50671-02 . . .

. . . the replacement part
is Kit #097528-01

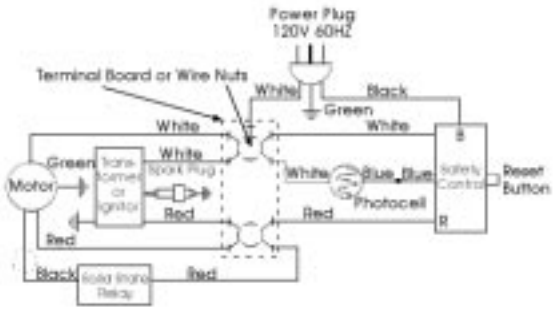
Solid State Relay
097061-01

Both are used primarily on older 100,000 BTU Reddy, Master and Knipco Heaters.

One of the most common questions we get concerns converting the old 3 Wire Safety Controls, with the new 2 Wire Safety Control. The adjoining space has the step by step instructions and the proper wiring diagram.

Flame Out Safety Control Instructions

! WARNING: Never service heater while it is plugged in, operating, or hot. Severe burns and electrical shock can occur.



Wiring Diagram

NOTE: This wiring diagram shows the new style motor start relay which may not be in your heater.

TOOLS REQUIRED
- 5/16" Nut Driver
- 9/16" Socket

1. Unplug Heater
2. Locate safety control by removing upper shell, side cover, or end cover. The location will vary depending on model.
3. Disconnect all electrical terminals connected to old safety control. Disconnect blue wire connected to photocell wire. Disconnect the white wire connected to terminal board or wire nut (depending on model).
4. Remove old safety control.
5. Install new safety control.
6. Refer to wiring diagram above, and connect wiring to new safety control as follows:
   A. Red wire to "R" terminal of safety control.
   B. Black wire to"B" terminal of safety control.
   C. Blue safety control wire to blue photocell wire.*
   D. White safety control wire with remaining white wires.*

*NOTE: If heater is equipped with terminal board and blue and white wires on old safety control have terminals installed, the following instructions must be followed:
   A. Connect terminal on blue safety control wire with terminal on blue photocell wire.
   B. Connect terminal on white safety control wire to terminal block as shown in wiring diagram above.

If heater is equipped with wire nuts, and blue and white wires on old safety control do not have terminals installed, the following instructions must be followed:
   A. Using old safety control as a guide, cut off both terminals on new safety control.
   B. Strip wire insulation back 3/8" on blue wire and 9/16" on white wire of new safety control.
   C. If white power cord wire has a terminal, cut terminal off and strip insulation to 9/16".
   D. Make all connections with wire nuts previously used.

7. Install upper shell, side cover, or end cover that was removed in step 2.

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Low Pressure Solid State Oil Heaters
Helpful Hints For Problems

PROBLEM	POSSIBLE CAUSE	REMEDY
Pulsation or uneven firing	1. Low fuel level or unit not level	1. Level unit. Keep tank filled.
	2. Air leak	2. Check air & fuel lines for air leaks.Filter not tight. No filter gasket.
	3. Water in fuel	3. Drain, flush & refill with clean,water-free fuel
	4. Low air pressure	4. Adjust air pressure. Clean or replace air filters.
	5. Nozzle leaking air into oil passages	5. Replace nozzle seal/O-Ring
Motor does not start	1. No power to unit	1. Check outlet & fuse. Check power cord for good contact.
	2. Defective motor	2. Replace motor
	3. Circuit breaker tripped	3. Depress reset button
	4. Loose circuit breaker connections	4. Check terminals on circuit breaker for good contact
	5. Defective circuit breaker	5. Replace circuit breaker
Motor runs slowly	1. Low voltage	1. Check voltage. Check length & size of extension cord
	2. Tight compressor	2. With unit unplugged turn fan by hand. If fan does not turn freely, adjust compressor ring.
	3. Motor defective	3. With unit unplugged fan turns freely. Replace motor
Cannot adjust air pressure	1. Air leak	1. Check air line, replace with O.E.M. airline if necessary. No "O" ring between filter body & compressor plate. Filter gasket not in place.
	2. Air line fitting or filter body loose	2. Tighten
	3. Compressor ring out of adjustment	3. Adjust gap between rotor and compressor ring. Gap too wide.
	4. Plugged nozzle	4. Clean
	5. Defective nozzle seal	5. Replace
	6. Dirty output filter	6. Clean filter or replace
	7. Dirty seat for ball in relief valve or dirty relief valve ball	7. Clean relief valve and seat. Replace valve ball.
	8.Spring in relief valve stuck or defective	8. Replace spring and ball
	9. Worn or broken compressor vanes.	9. Replace rotor and vanes
	10.Rotor worn	10. Replace worn rotor and blades
Runs indoors, not outdoors in cold weather	1. Water in fuel	1. Drain, flush & refill with clean water-free fuel
	2. Improper fuel	2. If weather is below 0˚F (-18˚C) kerosene should be used as fuel. It may also be necessary to add a de-icer.
	3.Low air pressure	3. Adjust pressure. Clean or replace air filters. Check for air leaks.
	4. Incorrect nozzle or spark plug adjustment	4. Adjust nozzle spacing. Check spark plug alignment
Heater starts then shuts off, does not fire.	1. Low fuel level.	1. Check that sufficient fuel is in fuel tank
	2. Defective transformer	2. Replace
	3. Dirty or plugged nozzle	3. Clean nozzle
	4. Low air pressure	4. Clean filters & or nozzle. Adjust proper air pressure
	5. Loose connectors	5. Check transformer-to-spark plug wire. Check fuel & air lines.
	6. Defective spark plug	6. Check for wear or adjust properly/replace.
	7. Water in fuel	7. Drain , flush , & refill tank.
Flames shoot from end of heater.	1. Wrong Fuel	1. Use proper fuel only
	2. Excess air pressure	2. Adjust pressure
	3. Improper air flow	3. Dirty or loose fan, air entrance at rear of heater blocked
	4. Air leak in oil line	4. Replace
Excessive spark plug wear.	1. Incorrect nozzle-to-spark plug spacing	1. Replace spark plug. (Nozzle adapter pulled back to far)
	2. Excessive air pressure	2. Adjust air pressure
Smoking or odors	1. Dirty filters	1. Clean or replace
	2. Low air pressure	2. Adjust to proper setting. Check for air leaks
	3. Contaminated or incorrect fuel	3. Drain fuel tank, flush and fill with clean fuel. Use proper fuel
	4. Insufficient air flow	4. Check that fan is tight on shaft. Check for dirt in fan or burner area or blocked air entrance.
	5. Dirty nozzle	5. Clean nozzle

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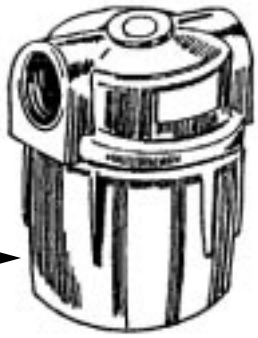
High Pressure Heater - Parts Information

Part No. M50398

If you have this

You may replace it with this filter

General Purpose Oil Filter

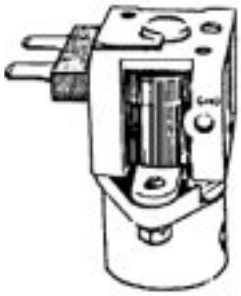


PART NO. 098102-01

This filter will replace any filter on an oil fired heater with an operating range of 5 gallons per hour or less. NO more high price cartridge filters! The steel element is washable!
Filter element with gaskets part no. 098103-01

Part No. M51102-01 (includes gasket)
This "string type" filter was used on the older 350's and 600's. This is the filter element from the filter canister part no. M50398

Part No. M51102-01

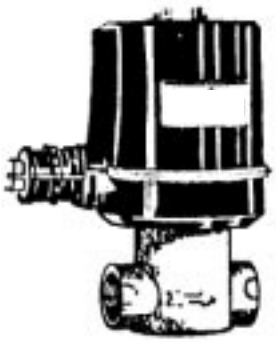


Part No. M50077
General Purpose
Solenoid Valve

You can replace this solenoid valve (part no. M50077,) with this general purpose solenoid valve (part no. 50010).

This can be used on ANY brand of high pressure oil fired heater. (120 volt)

These also can be used on steam cleaners!



Part No. 50010

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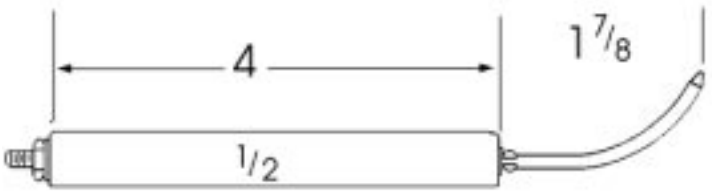
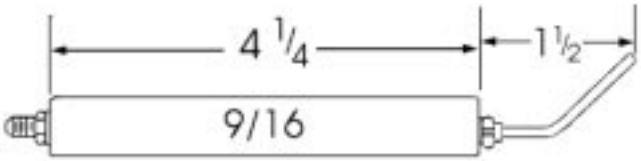
Electrodes

Part No. 154273 (Includes Bussbar)
Used on Air Scoop Heaters.

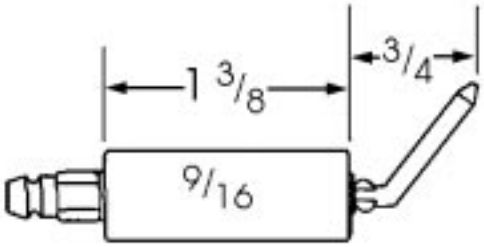


Electrodes for Champion High Pressure Heater
Other Possible Brands: Toro, Stone, Porta Heat



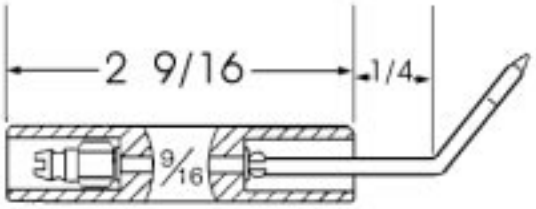
Part No.154185
Used on 320,000 & 650,000 BTU

Electrode for Stone High Pressure Heaters
Models: SG120, 160, 300, 500

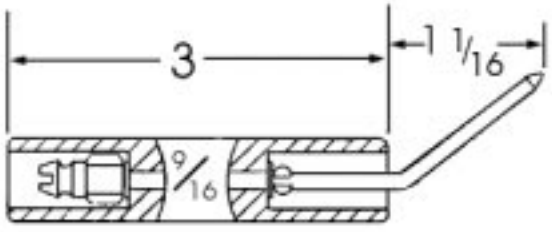


Part No.
36200

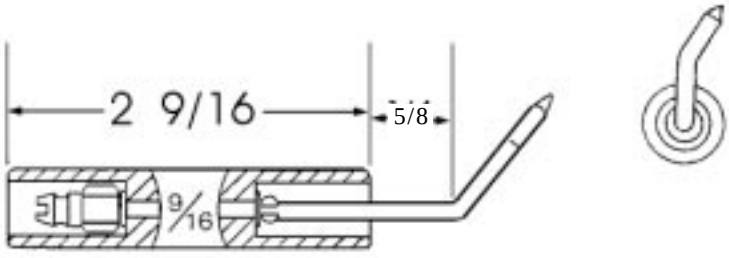
Electrodes for Master, Knipco, Koehring Heaters



Part No. M12951 Left
M12952 Right



Part No. M3981



Part No. M8989 Left
M8990 Right

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350,000 & 600,000 BTU Heaters made by Desa® Master, Reddy, Dayton, Koehring, Knipco, & Others

Troubleshooting - Problem Solving

Observed Problem
Motor starts, but heater will not ignite

Possible Cause
If No Spark Observed at Spark Plug
- **A. Spark plug has incorrect gap**
- **B. Defective transformer or transformer not grounded properly.**
- **C. Cracked spark plug**

Possible Cause
If Spark Observed at Spark Plug
- **D. Incorrect fuel pump pressure**
- **E. Defective fuel solenoid valve**
- **F. Fuel line leak on suction side of pump**
- **G. Dirty or damaged nozzle**
- **H. Dirty fuel filter**

Test Procedures

A. Spark Plug has incorrect gap
1. Unplug heater.
2. Remove upper shell of heater
3. Remove spark plug from burner head
4. Check gap between spark plug electrodes with feeler gage. Correct gap for spark plug is .05/.06 inch. Reset gap if needed.
5. Follow steps in procedure "B" to test for spark at spark plug electrodes.

B. Defective transformer
1. Unplug heater.
2. Remove upper shell of heater.
3. Remove spark plug from burner head. Make sure spark plug is properly gapped (see test procedure "A" for spark plug gap)
4. Check to make sure the transformer is properly grounded by the 2 mounting screws. Look for loose fasteners, corrosion, broken tabs, etc.
5. Connect the transformer secondary lead to the spark plug.
6. Establish a good ground between the spark plug body and heater. To do this, attach a grounding wire to heater shell. Clip grounding wire to grounding (outer) electrode on spark plug. Use insulated pliers to hold spark plug at spark plug hex. Note: Only use pliers with plastic or rubber sleeved handles.
7. Connect heater to electrical supply
8. Look for spark between electrodes. If the ground is good and there is no spark between electrodes, the transformer is defective.

Note: No spark between electrodes may be caused by cracked porcelain on spark plug. Before replacing transformer, see test procedure "C". If porcelain on spark plug is not cracked, proceed with replacing defective transformer.

C. Cracked spark plug
Follow steps under **DEFECTIVE TRANSFORMER** procedure, to test for spark at spark plug electrodes. If spark is seen at any place on the spark plug other than the electrodes, the porcelain insulator is cracked. Replace spark plug.

D. Defective fuel solenoid valve
1. Remove upper shell of heater
2. Check for fuel flow to nozzle. Do this by turning thermostat knob to warmest position and connecting heater to electrical supply. With motor running, look through air openings on rear of combustion chamber. See if nozzle is spraying out fuel. If nozzle is spraying out fuel, solenoid valve is working properly. If nozzle is not spraying out fuel, unplug heater and follow steps below to determine if solenoid valve is defective.
3. Disconnect yellow and white wires from solenoid valve.
4. Set ohmmeter on the 250VAC position.
5. Connect ohmmeter test leads to yellow and white wires that were connected to solenoid valve.
6. Connect heater to electrical supply. If 120VAC is being sent to solenoid valve and fuel pump pressure is correct, the solenoid valve is defective. Replace defective solenoid valve.

E. Fuel line leak on suction side of pump
Check all fuel lines on the suction side of the pump for tightness. An air leak in one of these fittings can allow air to enter the system. This will result in improper pump pressure.

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Component Description and Operation

Hot Surface Ignition Heaters (HSI)

On hot surface ignition (HSI) heaters the ignition control board (ICB) is what controls the entire heater electronically. There is no reset button and no motor start relay, with exception to some older HSI models. The ICB takes care of those components internally. Older HSI models have a motor start relay inline with motor and the ICB. The ICB needs to maintain a reading from the photocell to keep the heater running. All boards are now equipped with an inline fuse that is located on the board or in the main voltage supply line to the board. The fuse is a common GMA-10 fuse that can be found at a local automotive parts retail store or electrical supply store. The ICB should be handled with care. Always handle the board by its edges and never touch the male terminals or the electronics on the board. The oils from your skin can transfer to the ICB and cause a hot spot and will result in failure in the operation of the board. When a board becomes dirty, you should wipe it with a clean cotton cloth. Rubbing alcohol can be used if a solvent is needed.

A photocell for a Hot Surface heater works entirely differently than one from a Solid State heater. An HSI photocell actually looks at the COLOR of the flame inside the combustion chamber. Under normal operating conditions, the flame will be orange in color. If the heater begins to burn lean, the flame begins to turn a blue in color. The photocell reacts almost immediately and shuts down the heater. A drop in pressure will cause the change in color of the flame thus causing a changed light intensity. This sequence will cause the photocell to build up enough resistance to force the heater to shut down in less than ONE SECOND. This makes proper air pressure adjustment crucial. See specs on the proper air pressure adjustment on your model.

Glowbar

Proper Handling

Handle the glowbar with care. Do not touch the heating element with bare fingers. The oils from your skin can cause a hot spot on the heating element, which could result in the glowbar disintegrating. Handle the glowbar by its ceramic mounting block only. If a glowbar becomes dirty, use a clean cotton cloth to wipe debris or dust off the heating element.

When installing the glowbar, it is important not to strike the heating element on any surface. Doing so will cause the glowbar to shatter. Carefully follow the recommended instructions when installing a new glowbar.

Installation

1. Unplug the heater from the 120 volt source.
2. Remove the two wires for the existing glowbar from the pc board mounted inside the access panel.
3. Disconnect the air line and fuel line from the fittings on the nozzle adapter or burner head. Note the location placement of the hoses to avoid confusion on reconnection. If you have an older heater with a burner head, skip step 4 and go to step 5.
4. Leave the nozzle bracket attached to the combustion chamber and carefully remove the nozzle by twisting the nozzle adapter in a counter clockwise motion.
5. Remove the combustion chamber from the lower shell of the heater.
6. Stand the combustion chamber up on a workbench in a vertical position, nose cone down.
7. Loosen the set screw from ceramic mounting block on glowbar and carefully remove the glowbar.
8. Install new glowbar into combustion chamber, taking special care not to strike the heating element upon entry.
9. Replace the set screw with a black oxide mounting screw to avoid future vibration problems with original set screw. Repeat steps 2 – 5 in reverse order to re-install combustion chamber.

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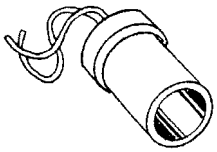
Hot Surface Ignition Tips

Photocell/H.S.I.


Photocell

The photocell works by sending a pulsating signal back to the PC board. The more intense the flame, the more intense the signal will be to the board. If the signal drops below a maintainable level, the photocell will tell the PC board to shut down the heater. A common symptom involving the photocell will be that the heater fires for five seconds, and then shuts down. Make sure that the pump pressure is set to factory specifications, since the pressure can drastically change the output of the flame and confuse the photocell. There are two ways to test the HSI photocell: 1) Use an HA1170 tester to effectively bypass the photocell, OR, 2) Replace the suspected bad photocell with a known working photocell. For instructions on using an HA1170, please refer to repair manual SM70101. Without an HA1170, the photocell CANNOT be bypassed.

Glowbar/HSI

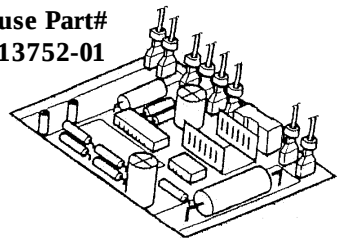
There are two types of glowbars: an older 85 VAC elongated glowbar, a 120 VAC "L-Shaped" glowbar, and a newer 85 VAC elongated glowbar made in heaters after 2004. The descriptions refer to the shape of the ceramic portion of the glowbars. The glowbar heats up to about 2,500°F and radiates enough heat to ignite the fuel spraying from the nozzle. Power will remain at the glowbar, coming from the PC board, for approximately 7 seconds. The glowbar will not come on again unless the thermostat calls for heat. The main symptom that occurs with the glowbar is that motor comes on, but the glowbar will not glow.

Testing the Glowbar

Disconnect the glowbar leads from the PC board and carefully remove the glowbar from the combustion chamber. Set a multi-meter to the 1000 ohm setting and connect the leads to each of the wires on the glowbar. The multi-meter should show a reading of 30 – 175 ohms. Next, gently tap the CERAMIC portion of the glowbar against your hand and observe the needle on the multi-meter. If you see any movement in the needle, the glowbar has developed a hair line crack. The glowbar is defective and should be replaced immediately.

PC/HSI BOARD

Fuse Part# 113752-01


PC Board/H.S.I.

The PC board is basically the brains of the hot surface ignition heater. The PC board works specifically by timing when certain components will receive power. The PC board also is the recipient of the signal from the photocell, which determines if the heater is operating safely. When the heater is plugged into a 120VAC, the board sends power to the glowbar. Approximately five seconds later, the board sends power to the motor. The motor rotates and reaches full RPM, sending air to the nozzle. The nozzle siphons fuel from the tank and is ignited from the radiant heat on the glowbar. Power is then removed from the glowbar and ignition has occurred. The board senses the photocell signal and keeps the heater operating. The main symptom that will occur with the PC board is that the heater does nothing when the thermostat calls for heat or the heater is connected to a power source. The PC board should be the main focus of the testing. Make sure that the heater is connected to a reliable 120VAC source. The first thing to do is check for power coming from the terminals that the glowbar is connected to on the PC board. Remove the pressure gauge port plug to assure that there is no pressure to generate fuel spray during the test. Set a multi-meter to the 200VAC level and connect the leads to the terminals on the board. Plug the heater into a 120VAC source and observe the multi-meter. Almost immediately, the multi-meter should register either 85VAC or 110VAC and maintain the voltage for approximately seven seconds. Which reading should appear will depend on which type of glowbar is in the heater. (See the glowbar paragraph for the descriptions.) Power should then cut off to zero, showing no voltage being sent to the glowbar. If the test performs as stated, then the glowbar should be tested for defects. Next, remove the leads running to the motor and perform the same test as above. This time, there will not be any voltage at the motor terminals for the first five seconds. After five seconds, there should be a constant supply of 120VAC to the multi-meter. The meter will eventually drop to zero volts because there is not a flame present in the combustion chamber for the photocell to send the signal to the PC board. If the test is performed as stated and the motor still will not come on, the motor should be bench tested and replaced if necessary. If the board fails any part of this test, the PC board should be replaced.

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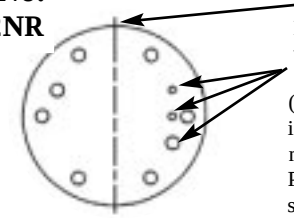
Toro Service Information

Possible Brands: Champion, Porta Heat, Lawn Boy, Arctic Flame, Stone, Other

Two styles of back plates, and inner housings were used at time of production. Determine which style the heater involved contains to insure proper Assembly and Operation.

Part No. 6832NR

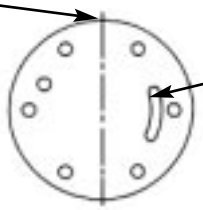
Top of Motor



Note the Position of these 3 Holes.

(Small holes must be in Upper Right when mounted correctly. Polished side of plate should be toward the Motor.)

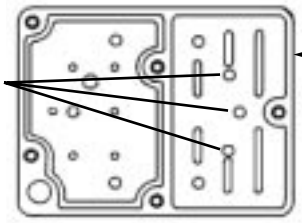
Part No. 154797



Inlet Slot

Back plates and housings are **not** interchangeable!

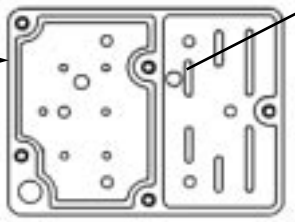
INLET HOLES



Part No. 6836NR

Original Style
1983-1989
Inlet holes on R.H. side of plate and housing half.

New "Quite" Style
1990 & Newer
Backing plate has slot in it instead of holes and housing half has inlet hole moved to location shown.

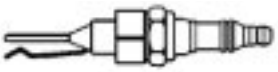


Inlet Slot

Part No. 154710

Part #M29835
Spark Plug used on Master, Reddy, Knipco, Remington, Sears, Dayton, Toro L.P., Others

Part #M10962-2 (I-32)
Spark Plug used on Master, Reddy, Knipco, Remington, Sears, Daytona, Koehring



Part #147080 (I-3)
Spark Plug used on Champion, Porta Heat, Lawn Boy, Red Line, Green Line, Century, Toro

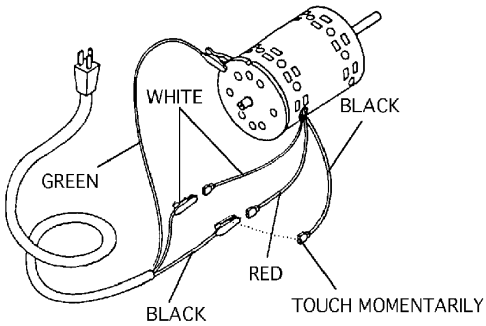
Note: Spark Plug is Secured in Place with a Setscrew only.

Please Note: Replace spark plug with identical Part Number

To Test 3 Wire Motor (Split Phase)

Connect wires as illustrated

A. White motor wire - to white power cord lead
B. Red motor wire - to black power cord lead
C. Momentarily (2-3 seconds maximum) touch black motor wire to the black power cord then release. This engages the "Start" winding long enough to bring motor up to speed for the "Run" windings to take over and continue running.

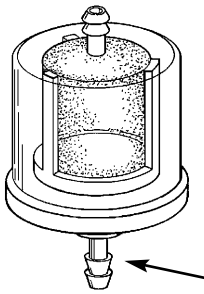


NOTE: The start windings are burned out when the motor turns slowly and does not increase speed after Step C.

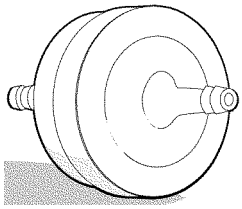
The motor is no longer usable if during Step C the motor comes up to speed but stops when black motor wire is released from the power lead.

Fuel Filter

Annually (or as needed), remove the filter from the fuel line and blow compressed air through it in the opposite direction of fuel flow. Safety glassed should be worn when using compressed air. If compressed air does not clean the filter, flow through filter is restricted. Filter must be placed.



Threads



Part No. 148647
Used on 40,000 and 55,000 BTU Toro heaters.

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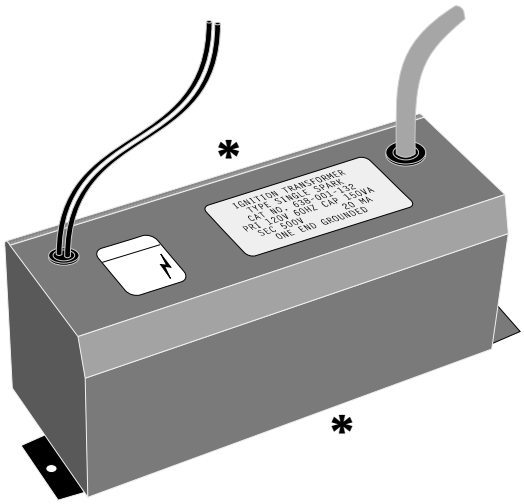
Toro Service Information

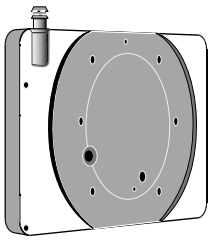


Old style Jefferson Transformer
Cat. # on transformer is 638-001-132. This exact transformer is no longer available. If you want to order the newer style transformer, the part # is 154009.
The newer style transformer is less expensive and it will last longer.

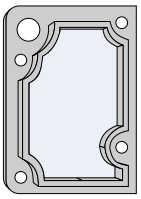
If the mounting tabs are where the "*" is, your part# is 102482-01

Parts for 40K & 55K Toro Heaters (1992 & 1993)

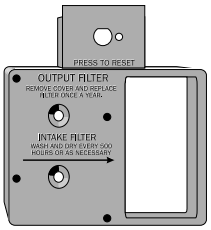
Part No. 148420
Filter Housing



Part No. 154822
Output Filter Kit



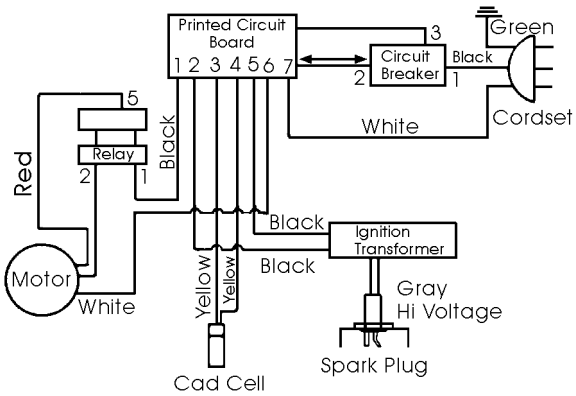
Part No. 148419
Filter End Cover

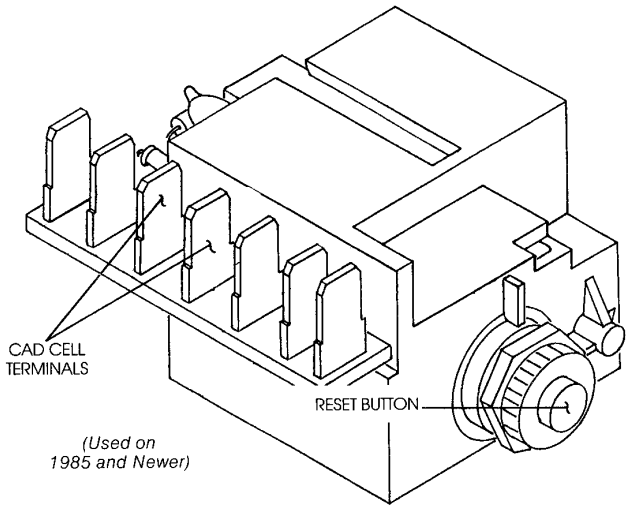

PRESS TO RESET
OUTPUT FILTER
REMOVE COVER AND REPLACE FILTER ONCE A YEAR.
INTAKE FILTER
WASH AND DRY EVERY 500 HOURS OR AS NECESSARY

Wiring Diagram With Motor Relay

If there is no motor relay see page 84.

97,000 - 150,000 BTU
1986 - Current





7 Terminal Safety Control for Toro

Used on newer heaters
Old Part No. 88336
New Part No. 115912-01
Comes without plastic cover.

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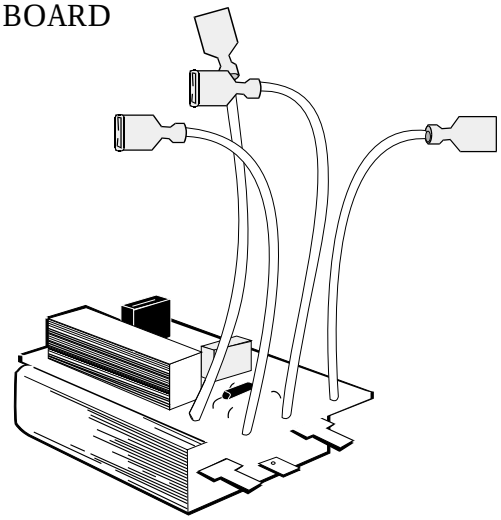
Troubleshooting the Flame Out Safety

PC BOARD



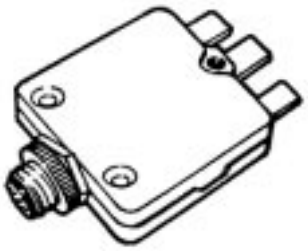
The Safety Flameout Control operates on the photoelectric principle whereby the presence or absence of light is changed to OHMs of resistance by the cad cell and monitored by the PC Board. The system consists of the flame detector (cad cell), printed circuit board (PCB) and the circuit breaker.

The function of these parts as a whole is to monitor the flame in the combustion chamber and to shut off power to the heater if no flame is present after about 20 seconds.

All power is supplied to the heater through the circuit breaker. The circuit breaker is controlled by the printed circuit board (PCB) which receives a sensing signal from the flame detector (cad cell) based upon the amount of light it “sees”.

During normal operation the flame detector is energized by the light of the burner flame and the safety circuit is not activated. When the absence of flame exists the flame detector does not sense light and activates the safety circuit. When the safety circuit is energized the small neon light on the PC Board will light up. This indicates that the timed cycle for automatic shut down has started and if the burner does not ignite within 20-35 seconds the main circuit breaker will trip shutting off all power to the heater.

If you find one of these parts are defective, they are no longer available. Please call for assistance.



BREAKER ASSEMBLY

There are two conditions that will alert you to a malfunctioning system:

1. The heater will continue to run after cool down cycle is completed with no flame in combustion chamber.

2. The circuit breaker will trip prematurely with a well established flame present in the combustion chamber.

CAD CELL ASSEMBLY

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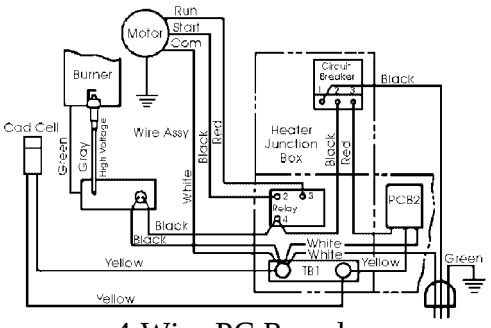
Service Information for the following brands:

Champion, Porta Heat, Red Line, Century, Lawn Boy, Arctic Flame, Stones

3 Wire to 4 Wire PC Board Conversion on 60, 97, 150 Inline Low Pressure Heaters

Disconnect the heater from any power source.

1. After removing the detective PC Board install the new 4 wire PC Board in its appropriate location
2. Connect the white wire and yellow wire of he new PC Board to the same location as the white and yellow wire of the 3 wire PC Board
3. Connect the red wire of the PC Board to the #4 terminal of the relay.
4. Connect the blue wire of the PC Board to the #2 terminal of the circuit breaker.
5. Test the heater and attach the wiring diagram on appropriate location

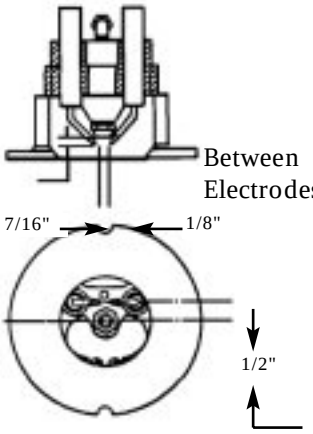


4 Wire PC Board Wiring Diagram

Electrode Setting for M3981

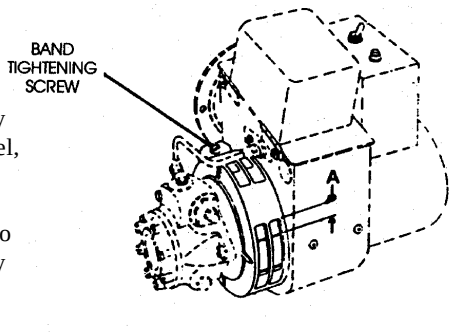
Brands included: Master, Knipco, Reddy, Koehring

NOTE: The settings shown are for most conditions of fuel, humidity and temperature. You may find it necessary to increase the 1/8 inch setting to 3/16, in order to achieve good ignition and burning. The 1/2 inch dimension must be kept.



AIR BAND ADJUSTMENT

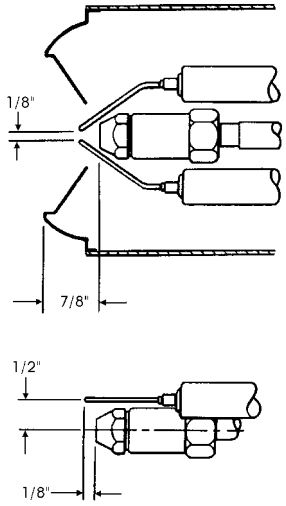
Air band setting may vary slightly depending on fuel, climate and altitude. If your heater operates properly, you will have no reason to alter the factory setting. To set the air band, with the heater running, close the air band until only an occasional flicker is observed.



APPROXIMATE FACTORY SETTINGS

Unit	Dimension "A"
1725 RPM Burner	
120,000 BTU	5/8"
155,000 BTU	1-13/16"
230,000 BTU	1-1/2"
***3450 RPM Burner**	
155,000 BTU	1-5/16"
230,000 BTU	1-1/2"

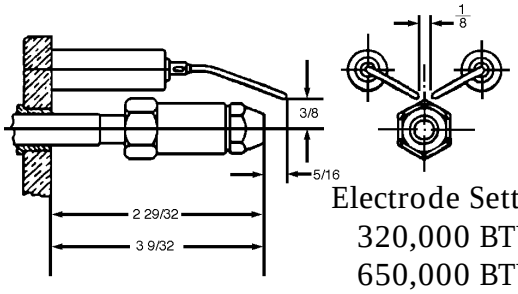
*High Speed Burner



Electrode Setting
Air Scoop Heater

ELECTRODE SETTINGS

Check electrodes for proper adjustment. The spark gap should be 1/8" (not to exceed 3/16") as shown. They should be 1/8" ahead of the nozzle face and 1/2" above the center of the nozzle. The relation of the electrodes to the nozzle and to the front end of the air cone is important.



Electrode Setting
320,000 BTU
650,000 BTU

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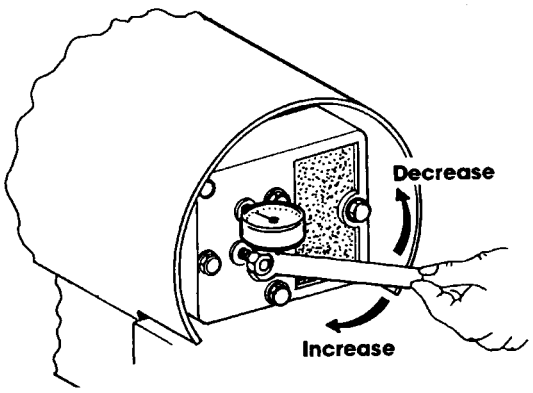
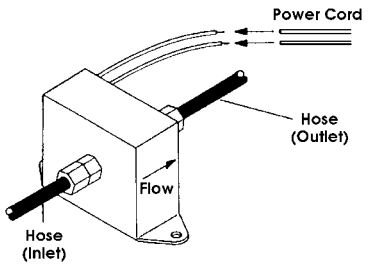
Toro Variable Output and 220 Service Information



Air Pressure Settings

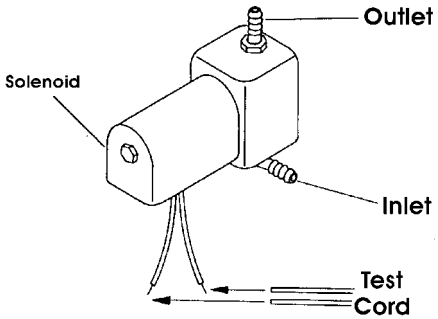
Heater Size	Air Pressure
220,000 BTU	6 1/4 PSI
Variable BTU 175,000-225,000 BTU	5 PSI (1985) 6 1/4 PSI (1986-Present)

To increase pressure: Slowly turn pressure adjusting screw located on the air output filter cover clockwise (IN).
To decrease pressure: Turn the pressure adjusting screw counterclockwise (OUT).



Fuel Pump Testing

Remove pump from unit, install fittings and suitable length hoses to inlet and outlet parts of pump, for testing purposes. Using the tank of heater or similar fuel supply, place pick-up (Inlet line) in fuel and connect wire leads of pump to a 115 volt test cord assembly as power supply. Fuel pump should prime by itself and pump a steady, constant volume of fuel. If it does not, Pump is defective and should be replaced.

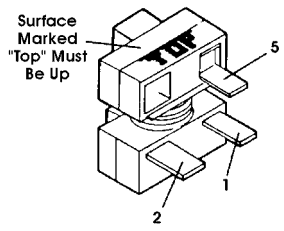


Fuel Solenoid Testing

(Located below nozzle adapter on Model 220 Only)

This parts function is to stop the flow of fuel through to the nozzle during the cool down period.

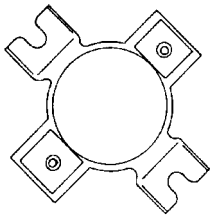
To test remove solenoid from machine and connect to 115 volt power source with power applied. The Solenoid should open (normal flow through it should exist). Disconnect electrical power to it and the solenoid should immediately close and prevent any flow through it.



Motor Relay Test

1. Conduct "Split Phase" Motor Test if motor is good (see page 18 for how to) Then connect it into heater. Check the wiring of unit.

2. Plug in the heater, if motor works the Relay is okay, if motor fails to turn, or turns slow, the Relay should be replaced.



Limit Switch Testing

The Fan Limit Switch controls the fan motor operation during the cool-down period after the thermostat has shut the fuel pump off. This switch is a "Normally Open" style and may be checked with an ohmmeter.

No Continuity should exist between terminals when switch is checked at normal ambient room temperature (cool). With heat (Hot Air) applied to achieve approximately 120˚ F, switch should close and continuity then exist between the terminals.

When the switch is allowed to cool, the switch should "Open" and continuity no longer exists.

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Common Replacement Parts

This section focuses on the parts that will commonly fail in oil and gas fired heaters. There are many parts that you can put into a heater. Hopefully, this portion of the tech book will give you a better understanding of what common parts you will need to stock in your repair shop for expedient repair service.

Brand Names Include:

Desa

Toro

Scheu

L.B. White

Of course, you can call one of our technicians at **PHP** at **800-362-6951** for advice on servicing your heaters and getting set up to repair your customers heaters.

One of the most common things to replace in an oil fired heater is the Filter Kit. This replacement should be done AT LEAST once per season, or on an as needed basis. Dirty filters will cause poor performance in your heater.

REPLACEMENT PARTS INDEX

Common Replacement Parts	Page No.
Pre-Packaged “HA” Kits	24
Bulk Packaged Parts	24
Spark Plugs	27
Thermostats	27
Tune Up Kits, Low Pressure Oil Fired	26
Tune Up Center	25
Wheel Kits	25

Pre-Packaged Parts

These pre-packaged parts are for the following brands: Master, Dayton, Desa, Knipco, Remington, Reddy

Below are the part numbers for the individual blister packs, the part it contains, and where used.

Helpful Hint: It is usually less expensive to order HA part kits, than ordering all of the individual parts inside each kit.

Part No.	Description	Used
HA3003	M50671-03 Safety control	All models Pre 1998
HA3004	M22456-1 Rotor (1/2"), (4) M8643 Blades M22009 Insert	Most models since 1988
HA3005	M22456-2 Rotor (5/8"),(4) M8643-2 Blades M22009 Insert	55, 60, 200
HA3006	079744-01 Nozzle	35,000 BTU
HA3007	M50597 Nozzle	50,000 BTU
HA3008	M50880-01 Nozzle, M8882 Seal	70,000 BTU
HA3009	100735-06 Nozzle, M8882 Seal	100-110,000 BTU
HA3011	100735-07 Nozzle, M8882 Seal	150,000 BTU before 1992
HA3012	M10962-2 Spark plug	70, 100, 150
HA3013	M29835 Spark plug	35, 50
HA3014	M29632 Filter, M29633 Filter M29612-01 Filter	35, 50, 70
HA3017	M12179 Filter, M12244-1 Filter M11637 Filter, M51150-01 Fuel Filter	100-150,000BTU After 1992
HA3018	M12179 Filter, M12244-1 Filter M11637 FIlter, M19630 Fuel Filter	150,000 BTU before 1992
HA3019	M16656-4 Photo Cell	All models Pre 1998

Part No.	Description	Used
HA3020	M8940 Ball, M10993-1 Spring M27694 Adj. Screw, M22997 Plug	All models
HA3021	100070-01 Nozzle Kit	55,000 BTU
HA3022	100006-01 Nozzle, M8882 Sleeve (Replaced by HA3009)	110,000 BTU
HA3023	100735-10 Nozzle, M8882 Sleeve	165,000 BTU
HA3024	Nozzle	60,000 BTU
HA3026	Nozzle	70,000 BTU
HA3027	Nozzle	110-115,000 BTU
HA3028	Nozzle	150-155,000 BTU
HA3029	Nozzle	165,000 BTU

The parts below are not blister packed.

HA1170	Safety Control / Photo Cell Tester	All Models
HA1180	15 PSI Air Gauge	(Especially HSI Heaters) Non HSI Heaters
HA1202	Heavy Duty Wheel Kit	35, 50, 70
HA1206	Light Duty Wheel Kit	35, 50, 70
HA1210	Thermostat with numbers on dial	All non thermostat models
HA2203	Handle (front or rear)	100,000 BTU
HA2204	Handle (front or rear)	150,000 BTU
HA2205	Handle Kit	

Bulk Packaged Parts - (Six Packs)

These parts are used only in Heaters made by DESA ®.
Brand Names Include: Reddy, Master, Remington, Knipco, Koehring, DESA, Dayton

Part #	Description
M22009-6	Rotor Inserts for DESA Heaters
M27694-6	Pressure Adjusting Screw
M22997-6	Plastic Plug in End Plate
M8940-6	Steel Ball in End Plate
M10993-6	Spring in End Plate
M10962-6	Long Spark Plug, Models 70-600
M29835-6	Short Spark Plug, Models 35 & 50
M11637-6	Small Lint Filter Models 100-150
M12179-6	Rectangular Sponge Air Filter, Models 100-150
M12244-6	Felt/Cork Output Filter Models 100-150
M29633-6	Half Moon Sponge Air Filter, Models 30-70
M29612-6	Felt/Cork Output Filter Models 30-70
M29632-6	Small Lint Filter Models 30-70
28268	Plastic transformer -All DESA low pressure htrs

These parts are used only in Heaters made by Toro
Brand Names Include: Champion, Porta Heat, Lawn Boy, Century, Gilson, Red Line, Wheat Belt

Part #	Description
224003	154003 Output Filters
227019	147019 Input Filters
227012	147012 Gaskets
227015	73-6430 Rotor Inserts
227790	147790 Round Input Filters
224467	154467 Round Output Filters
227080	147080 Spark Plugs
224009	154009 Transformers

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Tune-Up Center

This parts center is for the following brands: Master, Dayton, Desa, Knipco, Remington, Reddy

Below are the part numbers for the individual blister packs, and the part description that are included on the parts center.

Tune Up Center Part # HA3030
Compatibility: Master, Dayton, Reddy, Knipco, Remington, Desa, Sears, Koehring, and others
Includes a wire rack display, header card, low pressure service manual and these parts:

3 - HA3003 Safety control	3 - HA3004 Rotor kit
2 - HA3006 Nozzle 3	2 - HA3007 Nozzle 50
6 - HA3020 Pump Kit	2 - HA3009 Nozzle 100,110
2 - HA3011 Nozzle 150	4 - HA3012 Plug 70, 100, 150
3 - HA3013 Plug 35, 50	3 - HA3014 Filter kit 35, 50, 70
3 - HA3017 Filter kit 100	3 - HA3018 Filter kit 150
3 - HA3027 Nozzle Assembly	4 - HA3019 Photo Cell

Getting Started . . .If you're just getting started, the parts kit listed above, is excellent, not only for retail sales, but it includes most of the common parts you need for heater repair.

Wheel Kits

Works on the following models: 30, 35, 40, 50, 55, 60 and 70,000 BTU heaters made by DESA. Brands include Reddy, Knipco, Desa, Master, Remington, and others.

HA1202

Kit # HA1202
This is a heavy duty wheel kit that is similar to the wheel kits on the 100 &150 models.

Kit # HA1206 (light duty)
Designed for units 70,000 BTU and smaller.
(Not Pictured)

Kit # 53599 Toro
The Toro kit will only work on recent heaters made by Toro: model numbers 53400, 53401, and 53412.

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Oil Fired Heater Tune Up Kits*

	Tune Up Kit Part#	Input Filter	Output Filter	Lint Filter	Spark Plug	Nozzle Seal/O-ring	Nozzle Spring	Nozzle Washer	Fuel Filter	Gasket	Nozzle Adapter	Misc.	Service Manual
Desa Heater Models	TU150	M12179	M12244-1	M11637	M10962-2	M8882	M10809-1	M10659-1 (2)	M19630 Long Filter	N/A	N/A	N/A	SM70101
	TU110	M12179	M12244-1	M11637	M10962-2	M8882	M10809-1	M10659-1 (2)	M51150-01 Short Filter	N/A	N/A	N/A	SM70101
Toro Heater Models	TU50	M29633	M29612-01	M29632	M29835	147082	N/A	N/A	N/A	N/A	079980-01	M29824 Spark Plug Nut	SM70101
	154891** Toro/ Lawn Boy	147019	154003	N/A	147080	147082	N/A	N/A	147046	147012	147081	N/A	SM70101
	53594**	148442	154822	N/A	148544	147082	N/A	N/A	148647	N/A	N/A	147635 Spark Plug Nut	SM70101
All Pro & N. Riverside	APRS** Round Shell	6844NR	6843NR	N/A	6855NR	147082	N/A	N/A	6861NR	6839NR	N/A	N/A	SM70101
	APOS Octagon Shell	6844NR	6843NR	N/A	1803NR Electrode	147082	N/A	N/A	6861NR	6839NR	N/A	N/A	SM70101

* Not designed for Hot Surface Ignition (H.S.I.) Heaters
** Limited quantity available

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Spark Plugs

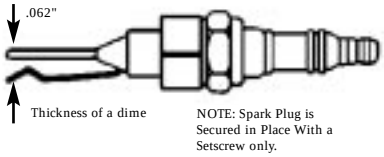
#M10962-2
Auburn plug is part #I-32
Used on Master, Reddy, Knipco,
Remington, Sears, Dayton, Others

Gapping Instructions for M10962-2 (HA3012)
150 Kerosene Models: .070” - .080”
150 Kerosene Models with Solid State Ignition: .050” - .060”

CHAMPION PLUG

#M29835 (Champion #N12YC)
Used on Master, Reddy, Knipco, Remington,
Sears, Dayton, Toro L.P., Others

Gapping Instructions for M29835 (HA3013)
45 & 80 LP Models: .060” - .080”
150 LP Models: .090” - .110”
Kerosene Gapping .050” - .060”



#147080 (Auburn #I-3)
Used on Champion, Porta Heat,
Lawn Boy, Red Line, Wheat Belt,
Century

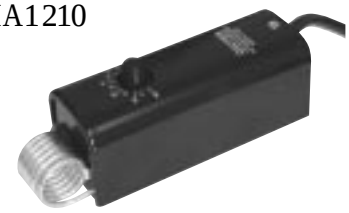
Thermostats

PT100HTST

Part No. PT100HTST

This efficient thermostat, an optional accessory, holds the temperature at the level you select, helps you to economize on fuel. It also works as a convenient on-off control. Requires no special installation, just plugs into any standard 115V, 60Hz electrical outlet. Works very well in the construction/rental industry. It has a warmer-cooler dial. The temperature sensing element is inside the body so it is not as accurate as the HA1210. Range = 10˚ to 100˚ F

HA1210



Part No. HA1210

The HA1210 thermostat is more accurate because the sensing coil is on top of the unit, so it can respond faster to temperature change. It also has numbers on the adjustment dial. HA1210 range = 40˚ to 90˚ F.

Replacement Thermostat Cord 6 foot Part No. 12345

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Let Us Give You A Hand Fixing That Heater!

Low Pressure Service Manual

New & improved service manual. Includes info on Desa HSI heaters. It also covers all three manufacturers of low pressure oil fired heaters; Desa, Toro, and National Riverside.

Part #
SM70106

Gas Fired Service Manual

New service manual! Gives an understanding of gas fired heaters, parts description & photos and troubleshooting. It also covers three manufacturers of gas fired heaters: Desa, Scheu and L.B. White

Part #
GM70103

Part #CDTECH

Part #CDTS

Part #CD70106

Part #CDGF

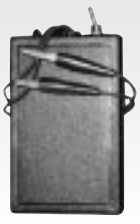
Essential Tool Kit For Repair Shop

Kit Includes

- •HA1170-Safety control tester
- •G14490-Low pressure gauge
- •40445-Electrode setting gauge
- •20T-Technical service catalog

Part#
RS100

A Must For HSI Troubleshooting



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Desa International Oil Fired Heaters

As a general definition, heaters with a transformer, spark plug, and a reset button are referred to as **Solid State**. Heaters that have a glowbar and a PC board are referred to as **Hot Surface Ignition (HSI)** heaters.

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please refer to the Quick Reference Parts Guide for common replacement parts.

If you need technical assistance, feel free to call **1-800-362-6951 ext2**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Desa Name Brands Include:

Amoco
Cenex
Co-op
Dart
Dayton
Desa
Handy Master
Homelite
John Deere
Knipco
Koehring
L.B. White
Master
Queen Bee
Reddy
Remington
Sears
TSC

HEATER INDEX

BTU Size/Description	Ignition Type	Reset Button	Page No.
35-50,000	Solid State	Yes	30
70,000	Solid State	Yes	32
100-165,000	Solid State	Yes	34
100 - 200,000	Solid State	Yes	36
200,000 with Thermostat	Solid State	Yes	38
350,000 High Pressure	Solid State	Yes	40
600,000 High Pressure	Solid State	Yes	40
Burner Assemblies			43
Handle & Wheel Kit Assembly			43
35-70,000	Hot Surface(HSI)	No	44
40-70,000	Hot Surface(HSI)	No	46
40,000	Hot Surface(HSI)	No	48
50-70,000	Hot Surface(HSI)	No	49
110-165,000	Hot Surface(HSI)	No	50
110-165,000	Hot Surface(HSI)	No	52
110-165,000	Hot Surface(HSI)	No	53
200,000 with Thermostat	Hot Surface(HSI)	No	56
200,000 with Thermostat	Hot Surface(HSI)	No	58
125,000-200,000 Pro Plus Series	Hot Surface(HSI)	No	60
Quick Parts Reference Guide	**Both**	**Both**	**63**

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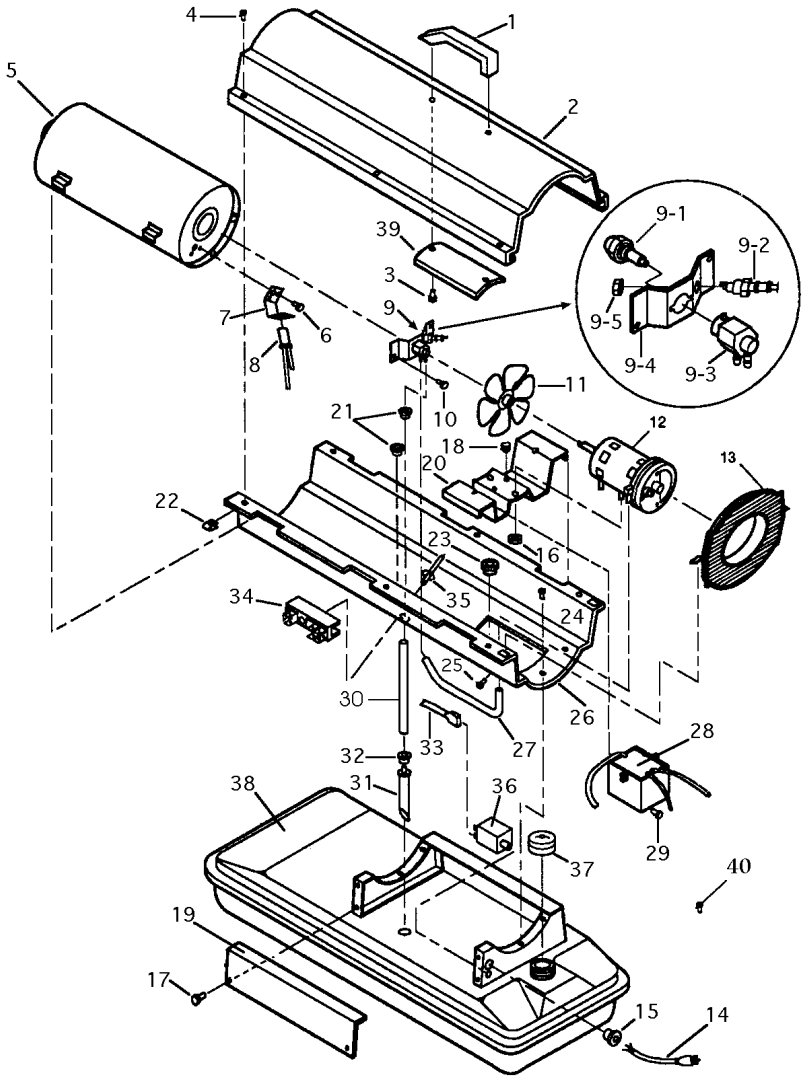
35,000-50,000 BTU Forced Air Desa Oil Fired Heater

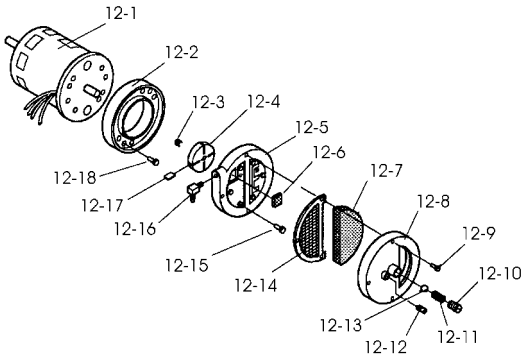
Model Numbers

Reddy	Remington	Desa
R35A	REM35A	C35B
R35B	REM50A	C50F
R50B	REM55	
R55		

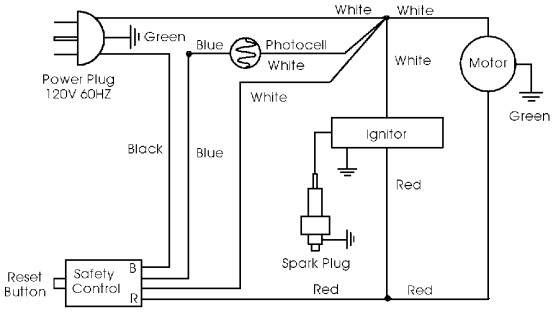
Master	Knipco
B50F	F50G



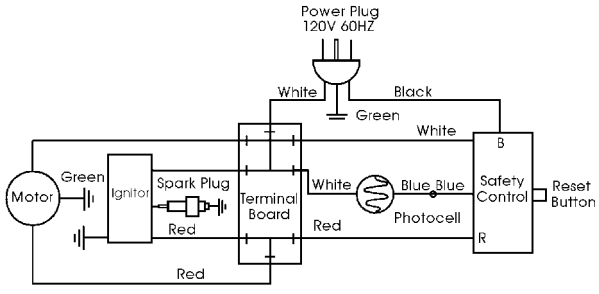
Motor & Pump Assembly



Wiring Diagram without Terminal Board



Wiring Diagram with Terminal Board



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35,000-50,000 BTU Forced Air Desa Oil Fired Heater

Key No.	Part Number	Description
1	M51104-01	Handle
2	**Upper Shell**	
	098511-36	R35B, R50B, R55A Reddy (White)
	098511-70	C35B, C50F Desa
	098511-67	REM35A, REM50A, REM55 Remington (Black)
	098511-54	B50F Master (Yellow)
	098511-73	F50G Knipco
3	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
4	100647-01	Screw, #10-16 x 1/2" (qty. 6)
5	**Combustion Chamber**	
	098512-05	R35A/B, C35B, REM35A
	098512-13	B50F, R50B, C50F, F50G, REM50A, R55, REM55
6	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
7	M16660	Photocell Bracket
8	HA3019	Photocell Assembly
9	**BURNER HEAD ASSEMBLY**	
9-1	**Nozzle**	
	HA3006	R35B, C35B, R35A, REM35A
	HA3007	B50F, R50B,C50F, F50G, REM50A, R55, REM55
9-2	HA3013	Spark Plug
9-3	079980-01	Nozzle Adapter
	147082	Nozzle O-ring (for all nozzles)
9-4	**Bracket**	
	097125-01	R35A/B, C35B, REM35A, B50F, R50B, F50G, REM50A
	097124-01	R55,REM55
9-5	M29824	Nut, 14mm
10	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
11	M30884	Fan
12	**MOTOR AND PUMP ASSEMBLY**	
12-1	102001-01	Motor
12-2	**Pump Body Ring**	
	079975-01	1/2"-R35A/B, C35B, REM35A, B50F, R50B, C50F, F50G, REM50FA
	079975-03	5/8"-R55, REM55
12-3	M22009	Insert
12-4	**Rotor**	
	M22456-1	1/2"- R35A/B, C35B, REM35A, B50F, R50B, C50F, F50G, REM50FA
	M22456-2	5/8" - R55, REM55
12-5	M29608	Pump End Cover (Metal)
12-6	M29632	Lint Filter
12-7	M29633	Intake Filter
12-8	M29609	Filter End Cover (Plastic)
12-9	M12461-31	Screw, #10-32 x 1" (qty. 3)
12-10	M27694	Adjusting Screw
12-11	M10993-1	Pressure Relief Spring
12-12	M22997	Plug
12-13	M8940	1/4" Steel Ball
12-14	M29612-01	Output Filter
12-15	**Screw**	
	M12461-31	Screw, #10-32 x 1" (R35A/B,C35B, REM35A, B50F, R50B, C50F, F50G, REM50A) (qty. 6)
	M12461-32	Screw, #10-32 x 3/4" (R55, REM55) (qty. 6)
12-16	M50016	Elbow 90˚
12-17	**Vanes (set of 4)**	
	M8643	1/2"(R35A/B, C35B, REM35A, B50F, R50B, C50F, F50G, REM50A)
	M8643-2	5/8" (R55, REM55)
12-18	**Screw**	
	FHPF3-2C	#10-32 x 1/4"(R35A/B, C35B, REM35A, B50F, R50B, C50F, F50G, REM50A) (qty. 2)
	FHPF3-6C	#10-32 x 3/4" (R55, REM55) (qty. 2)

Key No.	Part Number	Description
13	M51105-01	Fan Guard
14	**Power Cord**	
	098219-19	Power Cord
15	M11143-1	Strain Relief Bushing
16	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
17	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
18	M50631	Rubber Bumper (qty. 2)
19	M50899-03AA	Side Cover
20	101205-01	Motor Bracket
21	M30865-02	Bushing (qty. 2)
22	M11271-8	Clip Nut (qty. 6)
23	M50104-02	Bushing
24	M11084-26	Screw, #10-16 x 3/8" (qty. 6)
25	M15823-37	Screw, #8-18 x 1/4"
26	**Lower Shell**	
	098511-18	Reddy - R35B, R50B, R55
	098511-91	Desa - C35B,C50F
	098511-81	Remington - REM35A, REM50A, REM55
	098511-12	Master - B50F
	098511-93	Knipco - F50G
27	M29652-04	Rubber Airline 17"
28	102482-01	Ignitor Kit (transformer)
29	M11084-29	Screw, #10-16 x 3/4"
30	**Fuel Line**	
	M29652-05	R35A/B, C35B, REM35A
	079973-01	B50F, R50B,C50F, F50G, REM50A,R55,REM55
31	**Fuel Filter**	
	M50876-04	R35A/B, C35B, REM35A
	M50876-02	B50F, R50B, C50F, F50G, REM50A
	M50876-05	R55, REM55
32	M10990-3	Rubber Bushing
33	M16841-57	Wire Assembly (Red, 6")
34	099125-02	Terminal Board
35	099157-01	Rivet
36	HA3003	Safety Control
37	097702-01	Fuel cap with gasket (2-1/8")
38	**Fuel Tank**	
	108088-01	R35A/B, C35B, REM35A
	108088-02	B50F (Only)
	098513-20	R50B, F50G, REM50A
	108088-03	R55, REM55
39	M51108-01	Heat Shield
40	NLA	No longer available
PARTS AVAILABLE - NOT SHOWN		
	M27417	Drain Plug with O ring
	M51017-01	Cushion Grommet (B50F only)(qty 2)
	079871-01	Tradename Decal (C35B, Desa)
	098493-01	General Info Decal (All 35K listed)
	097204-02	Tradename Decal (R50B Reddy)
	079863-01	Tradename Decal (C50F, Desa)
	079514-01	Tradename Decal (F50G, Knipco)
	098493-01	General Info Decal (All 50K listed)
	097204-08	Tradename Decal (R55, Reddy)
	097764-05	Tradename Decal (REM55 Remington)
	098493-01	General Info Decal (All 55K listed)
OPTIONAL ACCESSORIES		
	PT100HTST	Thermostat, warmer-cooler dial
	HA1210	Thermostat, degrees on dial
	HA1202	Heavy Duty Wheel & Handle Kit
	HA1206	Standard Wheel & Handle Kit
	HA1180	Pressure Gauge, Low Pressure
	HA3014	Filter Kit
	HA1170	Safety Control/Photocell Tester

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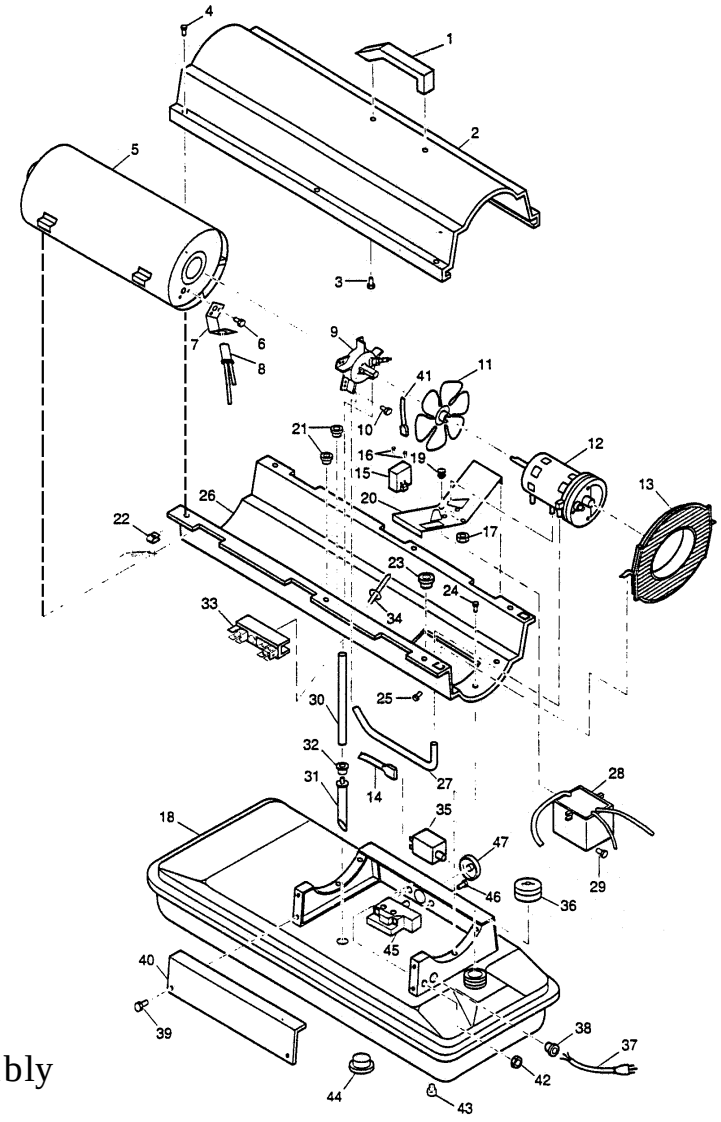
70,000 BTU Forced Air Desa Oil Fired Heater Parts

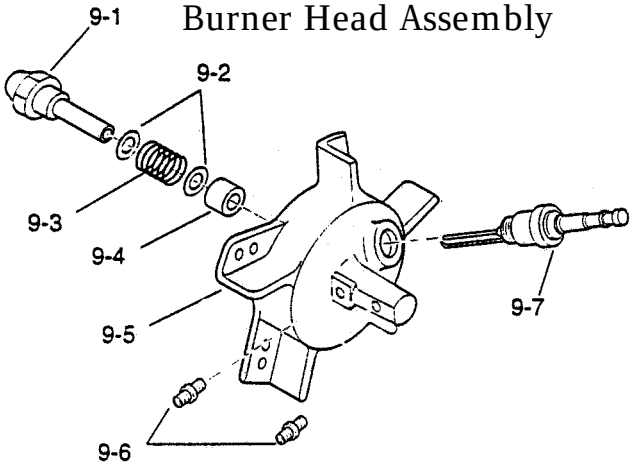
Model Numbers

Reddy	Master	LB White
R70	B70	K70(T)
R70A(T)	B70B	
R70B(T)	B70T	
R70T		
R70CT		

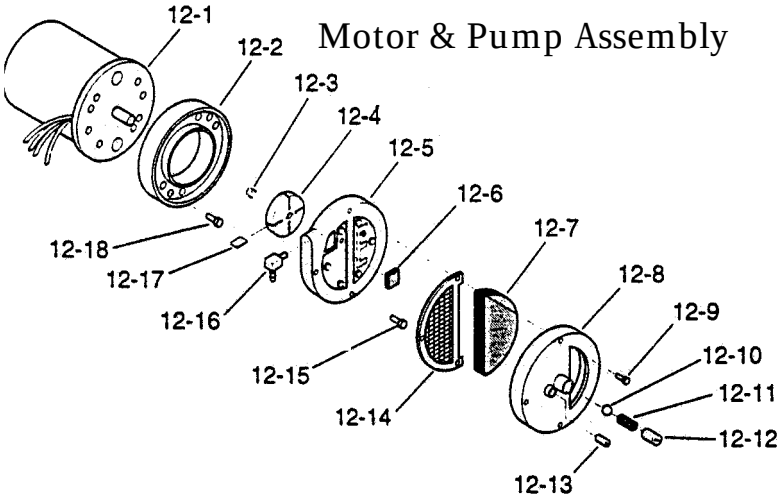
Handy Master
HM70



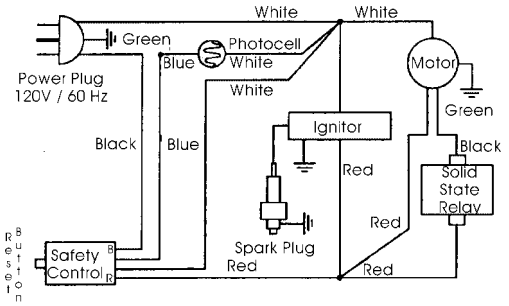
Burner Head Assembly



Motor & Pump Assembly



Wiring Diagram-No Thermostat



Desa Oil 70,000 BTU

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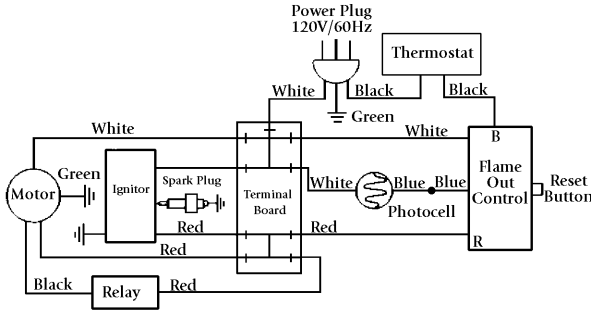
70,000 BTU Forced Air Desa Oil Fired Heater Parts

Key No.	Part Number	Description
1	M51104-01	Handle
2	**Upper Shell**	
	098511-36	White
	098511-54	Yellow
	098511-159	HM70
3	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
4	100647-01	Screw, #10-16 x 1/2" (qty. 6)
5	098512-12	Combustion Chamber
6	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
7	M16660	Photocell Bracket
8	HA3019	Photocell Assembly
9	**BURNER HEAD ASSEMBLY**	
9-1	HA3008	Nozzle
9-2	M10659-1	Washer, Nozzle Seal (qty. 2)
9-3	M10809-1	Spring Nozzle Seal
9-4	M8882	Nozzle Seal
9-5	M51098-02	Burner Head Body
9-6	M50820-01	Fitting Barb (qty. 2)
9-7	M10962-2	Spark Plug
10	M11084-27	Screw, #10-16 x 1/2" (qty. 3)
11	M51107-01	Fan
12	**MOTOR & PUMP ASSEMBLY**	
12-1	097308-05	Motor
12-2	079975-02	Pump Body Ring (1/2")
12-3	M22009	Insert
12-4	M22456-1	Rotor (1/2")
12-5	M29608	Cover, End Pump (Metal)
12-6	M29632	Lint Filter
12-7	M29633	Intake Filter
12-8	M29609	Filter End Cover (Plastic)
12-9	M12461-31	Screw, #10-32 x 1" (qty. 3)
12-10	M27694	Adjusting Screw
12-11	M10993-1	Pressure Relief Spring
12-12	M22997	Plug
12-13	M8940	Steel Ball, 1/4" diameter
12-14	M29612-01	Output Filter, (cork edge)
12-15	M12461-31	Screw, #10-32 x 1" (qty. 9)
12-16	M50016	Elbow, 90˚ Barb Fitting
12-17	M8643	Vanes (1/2") package of 4
12-18	FHPF3-2C	Screw, #10-32 x 1/2" (qty. 2)
13	M51105-01	Fan Guard
14	M16841-57	Wire Assembly
15	097061-01	Solid State Relay
16	M15823-39	Screw, #8-18 x 1/" (qty. 2)
17	NTC-4C	Hex Lock Nut, 1/4"-20 (qty. 2)
18	108088-03	Fuel Tank
19	M50631	Rubber Bumper (qty. 2)
20	101205-01	Motor Bracket
21	M30865-02	Bushing
22	M11271-8	Clipnut (qty. 6)
23	M50104-02	Bushing
24	M11084-26	Screw, #10-16 x 3/8" (qty. 6)
25	**Grounding Screw**	
	M15823-37	#8x18x1/4" (B70/B, HM70, R70/A/B)
	M10908-14	#8x32x3/8" (B70BT, R70CT, K70)

Key No.	Part Number	Description
26	**Lower Shell**	
	098511-81	(B70/B/T)(HM70)
	098511-18	(R70/A/B, R70CT)
27	M29652-04	Air Line
28	102482-01	Transformer
29	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
30	079973-01	Fuel Line
31	M50876-05	Fuel Filter (with bushing)
32	M10990-3	Rubber Bushing
33	099125-03	Terminal Board
34	099157-01	Rivet
35	HA3003	Safety Control
36	097702-01	Fuel cap w/gasket
37	**Power Cord**	
	098219-19	All non-thermostat models
	098219-27	All thermostat models
38	M11143-1	Strain Relief Bushing
39	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
40	M50899-03AA	Side Cover
41	079010-18	Red Wire Assembly
42	099177-01	Hex Nut
43	M51017-01	Cushion Grommet (qty. 3)
44	M27417	Drain Plug (B70BT, includes O-ring)
45	097657-02	Thermostat (thermostat models only)
46	M10908-1	Screw, #6-32 x 1/4" (thermostat models only)
47	097658-02	Thermostat knob (thermostat models only)
PARTS AVAILABLE - NOT SHOWN		
	099650-01	Wire Clip (thermostat models only)
	M9900-192	Combustion Chamber Ground Wire
	098493-01	General Info Decal (All non-thermostat models)
	101118-01	General Info Decal (R70T)
	101118-02	General Info Decal (B70T)
	097646-02	Tradename Decal (Master)
	097204-03	Tradename Decal (Reddy)
	078949-02	Tradename Decal (Handy Master)
	HA1202	Heavy-duty Wheel Kit
	HA1206	Standard Wheel Kit
	PT100HTST	Optional Remote Thermostat
	HA1210	Optional Remote Thermostat
	HA1180	Air Gauge
	HA3014	Filter Kit
	HA1170	Safety Control/Photocell Tester

Wiring Diagram-Thermostat



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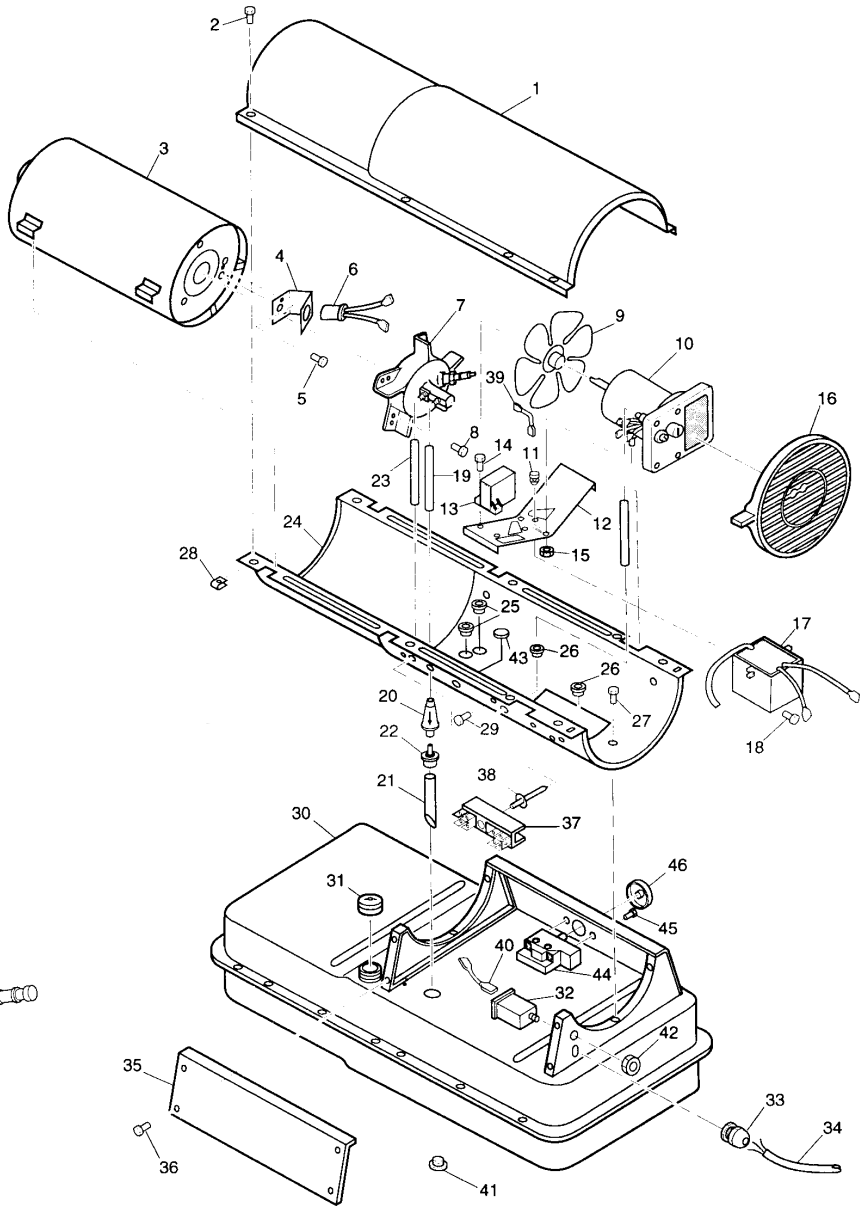
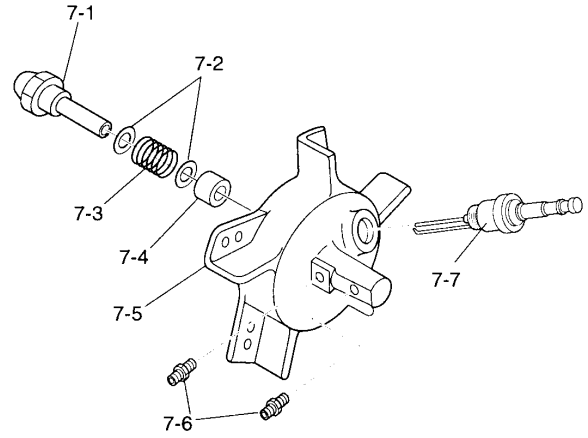
100,000-165,000 BTU Forced Air Desa Oil Fired Heater

Model Numbers

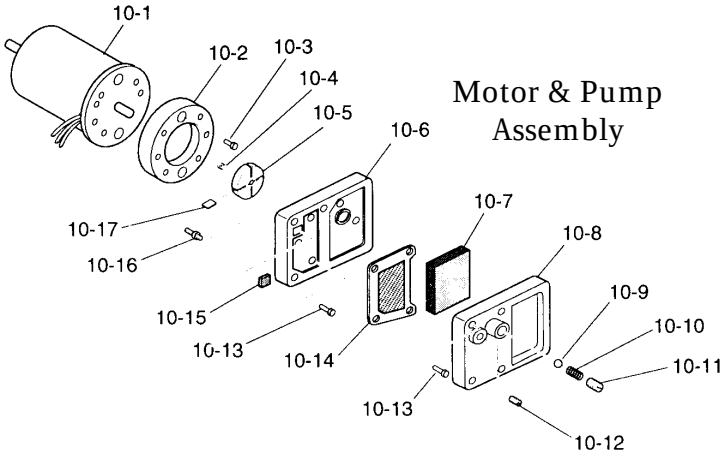
Reddy	Remington	Master
R100A	REM100	B100B
R100B	REM100A	B100G
R110	REM110	B110
R150AT	REM150A	B110T
R150B	REM150B	B150F
R150BT	REM155	B150FT
R150D	REM165	B150GT
R155		B150T
R165		B165
R165T		B165G
		B165T

Desa	Knipco	L.B. White
C100E	F110G	K150
C100F	F110H	
C150F	F150H	



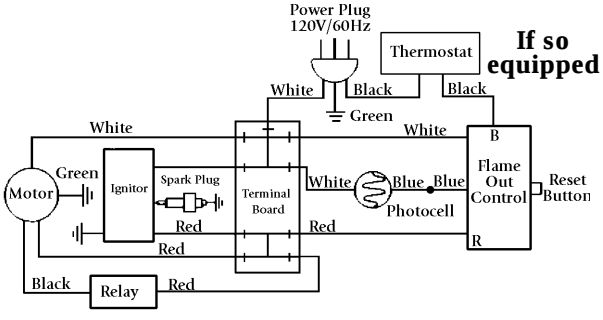


Burner Head Assembly



Motor & Pump Assembly

Wiring Diagram



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100,000-165,000 BTU Forced Air Desa Oil Fired Heater

Key No.	Part Number	Description
1	098511-66	**Upper Shell-**Replacement part will be black
2	M15823-27	Screw, #10-16 x 1/2" (qty. 8)
3	**Combustion Chamber**	
	098512-07	All 100,000 BTU Models
	098512-31	All 110,000 BTU Models
	098512-29	All 150,000 BTU Models
	098512-37	All 155,000 BTU Models
	098512-36	All 165,000 BTU Models
4	**Photocell Bracket**	
	M16660	All 100-110,000 BTU Models
	099229-01	All 150-155,000 BTU Models
5	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
6	HA3019	Photocell Assembly
7	**BURNER HEAD ASSEMBLY**	
7-1	**Nozzle**	
	HA3009	All 100-110,000 BTU Models
	HA3011	All 150-155,000 BTU Models
	HA3023	All 165,000 BTU Models
7-2	M10659-1	Nozzle Washer (qty. 2)
7-3	M10809-1	Nozzle Spring
7-4	M8882	Nozzle Sleeve
7-5	**Burner Head Body**	
	M50924-03	Burner Head Body - 100-155,000 BTU's
	M50924-07	Burner Head Body - 165,000 BTU's
7-6	M50820-02	Barb Fitting (qty. 2)
7-7	HA3012	Spark Plug
8	M11084-27	Screw, #10-16 x 1/2" (qty. 3)
9	**Fan Blade**	
	097293-01	Fan, 8 1/4" - 110-155,000 BTU's
	101897-01	Fan, 8 3/8" - 165,000 BTU's
10	**MOTOR & PUMP ASSEMBLY**	
10-1	**Motor**	
	097308-06	Motor, split phase - 100-155,000 BTU's
	102001-07	Motor, split phase - 165,000 BTU's
10-2	079975-02	1/2" Pump Body Ring
10-3	FHPF3-5C	Screw - 165,000 BTU's (qty. 2)
10-4	M22009	Rotor Insert
10-5	M22456-1	Rotor , 1/2"
10-6	M50545	Pump End Cover (metal)
10-7	M12179	Intake Filter (sponge)
10-8	M16545	Filter End Cover (plastic)
10-9	M8940	Steel Ball, 1/4" diameter
10-10	M10993-1	Relief Spring
10-11	M27694	Adjusting Screw
10-12	M22997	Plug
10-13	M12461-31	Screw, #10-32 x 1" (qty. 10)
10-14	M12244-1	Output Filter
10-15	M11637	Lint Filter
10-16	M50820-02	Barb Fitting
10-17	M8643	Blades 1/2" - Set of 4
11	M50631	Rubber Bumper (qty. 2)
12	101206-01	Motor Mounting Bracket
13	097061-01	Solid State Relay
14	M15823-39	Screw, #8-18 x 1/2" (qty. 2)
15	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
16	M51114-01	Fan Guard

Key No.	Part Number	Description
17	102482-01	Black Plastic Igniter
18	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
19	M51345-06	Fuel Line - 100-155,000 BTU's
	M51345-01	Fuel Line - 165,000 BTU's
20	M51150-01	Fuel Filter
21	M51151-01	Fuel Line Tube - 100-110,000 BTU's
	M51151-02	Fuel Line Tube - 150-165,000 BTU's
22	M10990-3	Rubber Bushing
23	M50814-03	Airline
24	098511-82	**Lower Shell-**Replacement part will be black
25	**Bushing**	
	M30865-02	Bushing, 100-155,000 BTU's (qty. 3) 165K (qty.2)
	M50104-03	Bushing, 165,000 BTU's (qty. 2)
26	M50104-01	Bushing, 165,000 BTU's (qty. 2)
	M50104-02	Bushing, 100-155,000 BTU's (qty. 2)
27	M11084-27	Screw, #10-16 x 1/2" (qty. 8)
28	M11271-8	Clip Nut (qty. 8)
29	M10908-14	Screw, #8-32 x 3/8"
30	**Fuel Tank**	
	108088-04	Fuel Tank (100-110,000 BTU)
	108088-05	Fuel Tank (150-165,000 BTU)
31	097702-01	Fuel Cap with gasket
32	HA3003	Safety Control
33	M11143-1	Strain Relief Bushing
34	098219-38	Power Cord 6"
35	M51077-12	Painted Side Cover
36	M11084-27	Screw, #10-16 x 1/2" (qty. 4)
37	099125-03	Terminal Board
38	099157-01	Rivet
39	079010-20	Wire Assembly (red, 18")
40	M16841-57	Wire Assembly (red, 6")
41	M27417	Drain Plug, includes o-ring
42	099177-01	Hex Nut, 3/8"-27
43	099213-01	Button Plug
44	097657-02	Thermostat (thermostat models only)
45	M10908-1	Screw, #6-32 x 1/4" (thermostat models only)
46	097658-02	Thermostat Knob "thermostat models only"
PARTS AVAILABLE NOT SHOWN		
	097896-01	Wheels (replacement will be white)(qty. 2)
	M51015-01	Axle (100-110,000 BTU)
	M16801-2	Axle (150-165,000 BTU)
	M12342-3	Wheel Support Frame (100-110,000 BTU)
	M12831-3	Wheel Support Frame (150-165,000 BTU
	HA2203	Front Handle (100-110,000 BTU)
	HA2204	Front Handle (150-165,000 BTU)
	M12345-33	Screw, #10-24 x 1 3/4" (qty. 8)
	M28526	Nutcap (qty. 2)
	NTC-3C	Hex Lock Nut #10-24 (qty. 8)
OPTIONAL ACCESSORIES		
	PT100HTST	Thermostat, warmer-cooler dial
	HA1210	Thermostat with degrees on dial
	HA1180	Air Gauge, 0-15 psi

SPECIFICATIONS

Output Rating	100,000	110,000	150,000	165,000
Fuel	Kerosene or #1 Fuel Oil		Kerosene or #1 Fuel Oil	
Fuel Tank Capacity	9 gallons	9 gallons	13.5 gallons	13.5 gallons
Fuel Consumption	0.74 GPH	0.83 GPH	1.10 GPH	1.20 GPH
Electric Requirements	120V/60hZ	120V/60hZ	120V/60hZ	120V/60hZ
Amperage (normal run)	4.5	4.5	4.5	4.5
Starting Amps	10	10	10	10

Output Rating	100,000	110,000	150,000	165,000
Motor Output	3450 RPM	3450 RPM	3450 RPM	3450 RPM
Hot Air Output	480 CFM	480 CFM	600 CFM	500 CFM
Air Pump Pressure	4.0 PSI	4.5 PSI	5.0 PSI	5.4 PSI
Shipping Weight	56 LBS	56 LBS	65 LBS	66 LBS
Weight without fuel	47 LBS	47 LBS	54 LBS	55 LBS
Duct	Not Recommended		Not Recommended	

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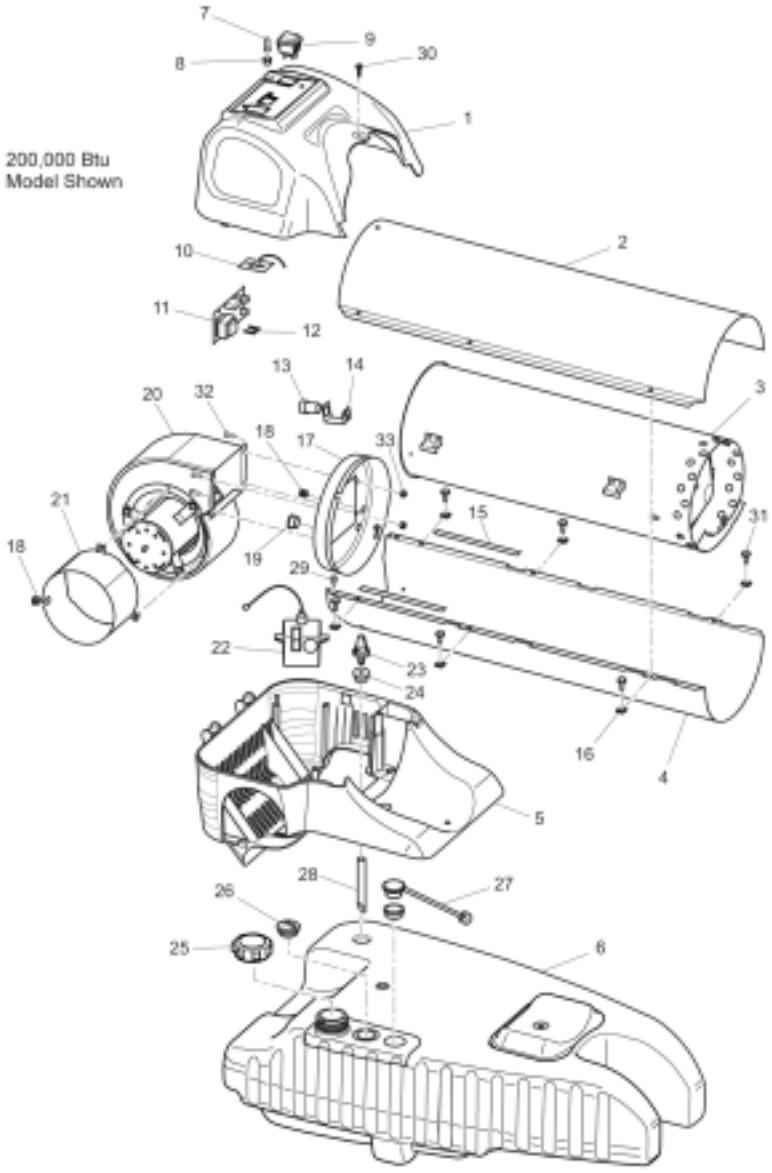
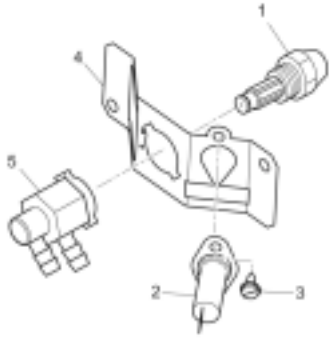
100,000-200,000 BTU Forced Air Desa Oil Fired Heater

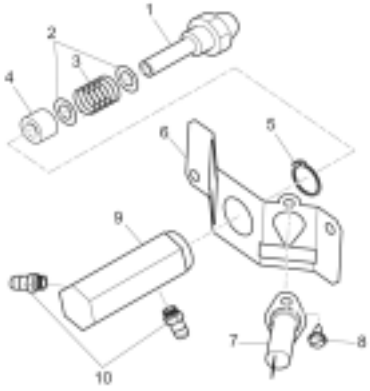
Model Numbers
TA100, TA103, TA106, TA111, TA101, TA104, TA107, TA112, TA102, TA105, TA108, TA113



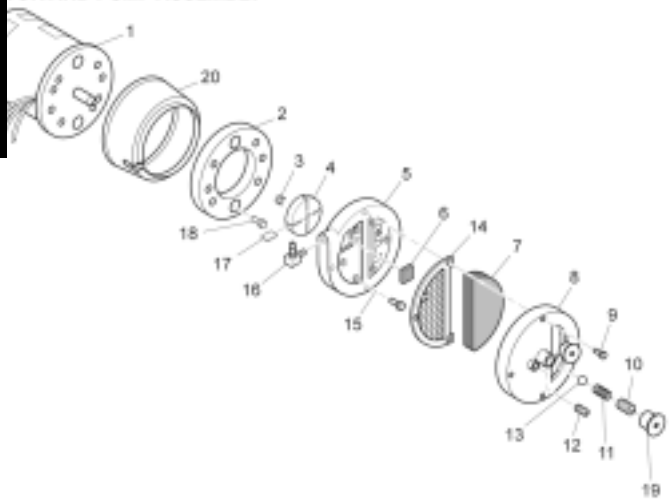
NOZZLE ASSEMBLY 100,000 AND 150,000 BTU MODELS

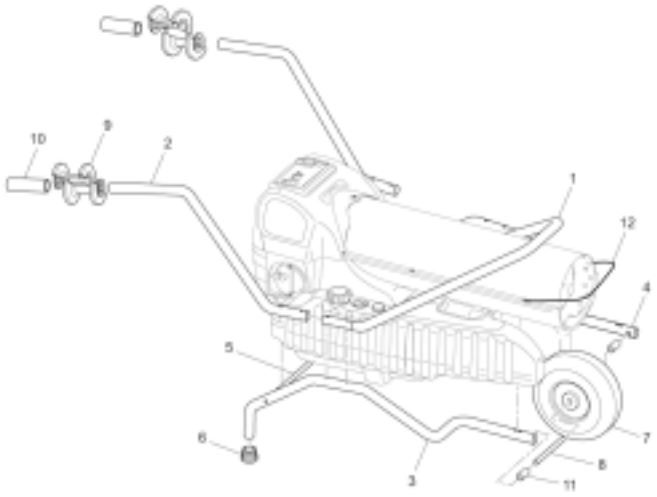


NOZZLE ASSEMBLY 200 MODELS



TOR AND PUMP ASSEMBLY





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100,000-200,000 BTU Forced Air Desa Oil Fired Heater

Key No.	Part No.	Description	100K	150K	200K
1	118375-01	Upper Shroud	•	•	•
2	107353-17	Upper Shell (service part will be black)	•	•	•
3	098512-79	Chamber Assembly	•		
	098512-80	Chamber Assembly		•	
	098512-81	Chamber Assembly			•
4	107353-16	Lower Shell	•	•	•
5	122096-01	Lower Shroud Kit	•	•	•
6	108088-17	Fuel Tank	•	•	•
7	113606-01	Temperature Sensor	•	•	•
8	113339-01	Grommet	•	•	•
9	120336-01	Rocker Lighted Switch	•	•	•
10	121593-01	Thermostat Push Pad with Decal	•	•	•
11	117766-01	Microprocessor Control	•	•	
	117766-02	Microprocessor Control			•
12	122187-01	Control Clip	•	•	•
13	M16656-26	Photocell	•	•	•
14	103154-03	Photocell Bracket		•	•
	107791-01	Photocell Bracket	•		
15	097785-13	Gasket qyt. 2	•	•	
16	M11271-8	Nut Clip qty. 6	•	•	•
17	118393-01	Blower Coupling	•	•	•
	097785-12	Coupling Gasket	•	•	•
18	M30865-02	Bushing	•	•	•
19	097776-01	Bushing	•	•	•
20	120326-01	Motor and Blower Assembly		•	•
	120326-02	Motor and Blower Assembly	•		
21	122095-01	Blower Sleeve Kit	•	•	•
22	122097-01	Ignition Module Kit	•	•	•
23	118422-01	Fuel Filter	•	•	•
24	M10990-3	Fuel Filter Bushing	•	•	•
25	118428-01	Fuel Cap with Gasket	•	•	•
26	121600-01	Tank Remote Plug	•	•	•
27	121543-01	Fuel Gauge with Gasket	•	•	•
28	M51151-03	Lower Fuel Tube	•	•	•
29	118445-01	Lower Shroud Screw	•	•	•
30	M11084-29	Upper Shroud Screw	•	•	•
31	M15823-27	Shell Screw qty. 6	•	•	•
32	M12461-62	Blower Bolts 1/4-20 x 5/8 qty. 4	•	•	•
33	103880-01	Blower Nuts 1/4 20 qty. 4	•	•	•
Parts available - not Shown					
	M51345-14	Upper Fuel Tube	•	•	
	M51345-09	Upper Fuel Tube			•
	M50814-08	Air Line	•	•	
	M50814-06	Air Line			•
	120337-01	Cable Assembly Switch	•	•	•
	M9900-197	Ignitor Ground Wire	•	•	•
	118418-01	Power Cord	•	•	•

WHEELS AND HANDLES

1	118404-01	Front Handle	•	•	•
2	118414-01	Rear Handle qty. 2	•	•	•
3	118800-01	Left Rear Leg	•	•	•
4	118800-02	Right Rear Leg	•	•	•
5	118411-01	Cross Support	•	•	•
6	118433-01	Rubber Foot qty. 2	•	•	•
7	118407-01	Wheel	•	•	•
8	M51015-05	Axle	•	•	•
9	118446-01	Extension Cord Wrap qty. 2	•	•	•
10	118425-01	Handle Grip qty. 2	•	•	•
11	113497-02	Spacers qty. 2	•	•	•
12	120365-01	Wire Guard	•	•	•

NOZZLE ASSEMBLY 100,000 AND 150,000 BTU

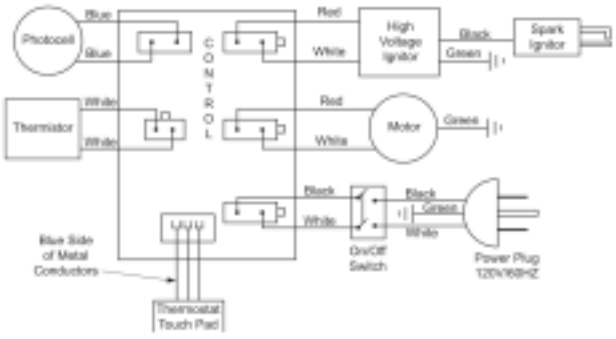
Key No.	Part No.	Description
1	100735-35	Nozzle Assembly (100)
	100735-36	Nozzle Assembly (150)
2	117000-01	Ignitor Electrode
3	M10908-2	Ignitor Screw
4	118390-01	Nozzle Adapter Bracket
5	104054-01	Nozzle Adapter

NOZZLE ASSEMBLY 200,000 BTU MODELS

1	100735-37	Nozzle Assembly
2	M10659-1	Nozzle Washer qty. 2
3	M10809-1	Nozzle Spring
4	M8882	Nozzle Sleeve
5	107272-01	Retaining Ring
6	118390-02	Nozzle Adapter Bracket
7	117000-01	Ignitor Electrode
8	M10908-2	Ignitor Screw
9	120254-01	Nozzle Adapter
10	M50820-02	Barb Fitting qty. 2

MOTOR ASSEMBLY

1	120326-02	Motor Blower (100)
	120326-01	Motor Blower (150/200)
2	079975-02	Pump Body (100)
	079975-03	Pump Body (150/200)
3	M22009	Insert
4	M22456-1	Rotor (100)
	M22456-2	Rotor (150/200)
5	M29608	Pump Cover (100/150)
	M29608-02	Pump Cover (200)
6	M29632	Lint Filter
7	M29633	Intake Filter
8	M29609	Pump End Cover
9	M12461-31	Screw, #10-32 x 1" qty. 3
10	M27694	Adjusting Screw
11	M10993-1	Pressure Relief Spring
12	M22997	Plug
13	M8940	Steel Ball, 1/4" Diameter
14	M29612-01	Output Filter
15	M12461-31	Screw, #10-32 x 1" (100) qty. 6
	M12461-33	Screw, #10-32 x 1 1/8" (150/200) qty.
16	103676-01	Plastic Elbow
17	M8643	Blade (100) qty. 4
	M8643-2	Blade (150/200) qty. 4
18	FHPF3-5C	Screw (100) qty. 2
	FHPF3-6C	Screw (150/200) qty. 2
19	105780-01	Plug Cap
20	121519-01	Rain Shield



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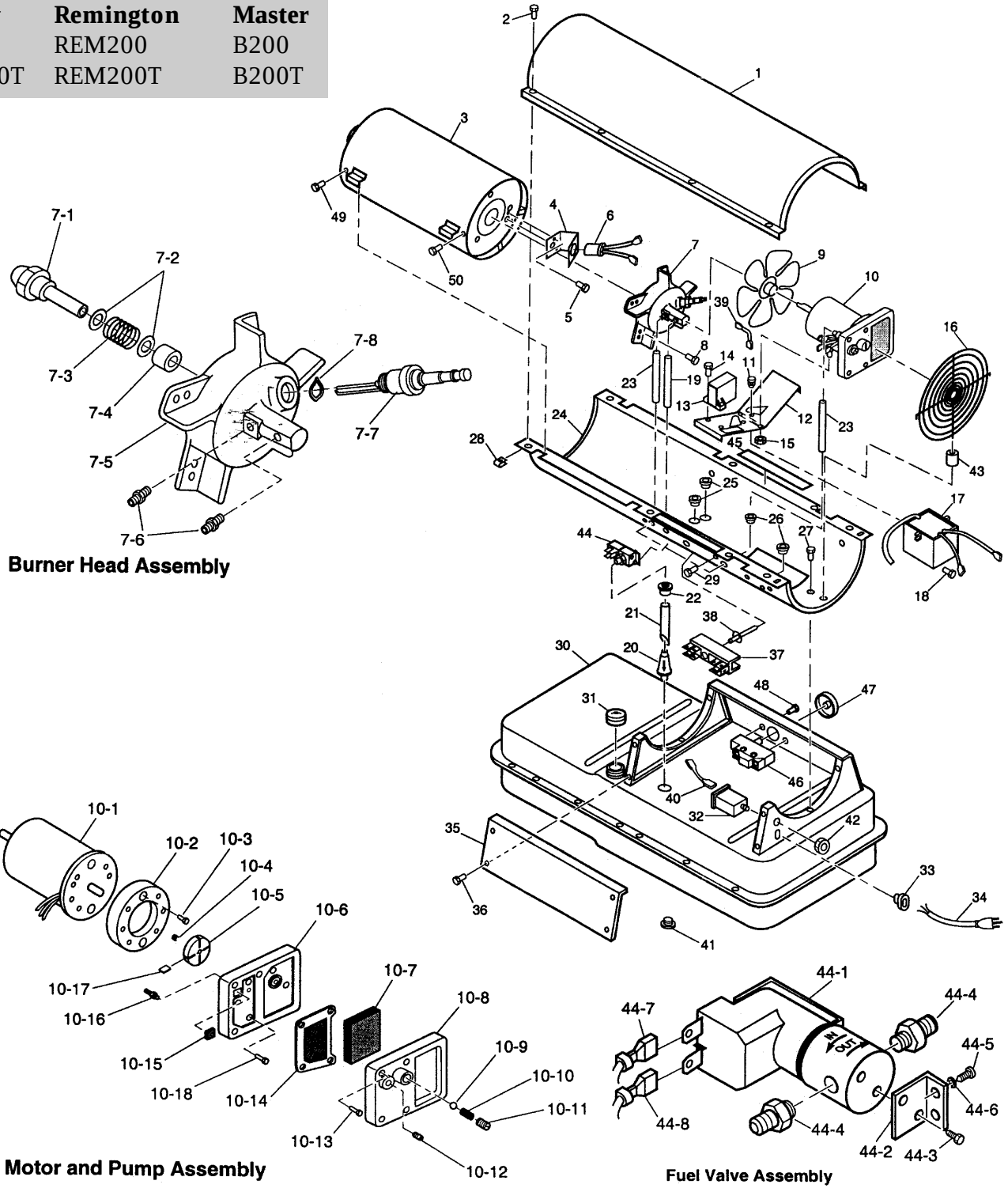
200,000 BTU Forced Air Desa Oil Fired Heater

Model Numbers

Reddy	Remington	Master
R200	REM200	B200
RM200T	REM200T	B200T



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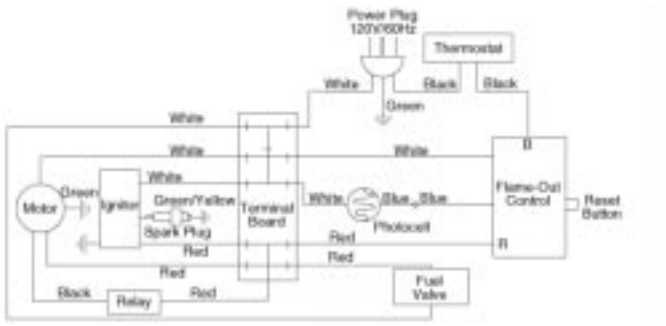
200,000 BTU Forced Air Desa Oil Fired Heater

Key No.	Part Number	Description
1	**UPPER SHELL**	
	098511-229	Upper Shell (Yellow)
	098511-230	Upper Shell (White)
	107353-01	Upper Shell (Black)
2	M15823-27	Screw, #10-16 x 3/8” (qty. 8)
3	098512-48	Combustion Chamber
4	099229-01	Photocell Bracket
5	M10908-2	Screw, #6-32 x 3/8” (qty. 2)
6	HA3019	Photocell Assembly
7	**BURNER HEAD ASSEMBLY**	
7-1	100735-13	Nozzle
7-2	M10659-1	Nozzle Washer (qty. 2)
7-3	M10809-1	Nozzle Spring
7-4	M8882	Nozzle Sleeve
7-5	M50924-08	Burner Head Body
7-6	M50820-02	Barb Fitting (qty. 2)
7-7	HA3012	Spark Plug
7-8	103409-01	Washer, Wave Spring
8	M11084-27	Screw, #10-16 x 1/2” (qty. 3)
9	102042-01	Fan
10	**MOTOR & PUMP ASSEMBLY**	
10-1	102001-07	Motor
10-2	079975-03	Pump Body Ring (5/8” metal)
10-3	FHPF3-6C	Screw, #10-32 x 5/8” (qty. 2)
10-4	M22009	Rotor Insert
10-5	M22456-2	Pump Rotor (5/8”)
10-6	M50545	Pump End Cover (metal)
10-7	M12179	Intake Filter (sponge)
10-8	M16545	Filter End Cover (plastic)
10-9	M8940	Steel Ball, 1/4” diameter
10-10	M10993-1	Pressure Relief Spring
10-11	M27694	Pressure Adjusting Screw
10-12	M22997	Plug
10-13	M12461-31	Screw, #10-32 x 1” (qty. 4)
10-14	M12244-1	Output Filter
10-15	M11637	Lint Filter (sponge)
10-16	M50820-02	Barb Fitting
10-17	M8643-2	Vanes (5/8”) set of 4
10-18	M12461-32	Screw, #10-32 x 1.12” (qty. 6)
11	M50631	Rubber Bumper (qty. 2)
12	101206-01	Motor Mounting Bracket
13	097061-01	Solid State Relay
14	M15823-39	Screw, #8-18 x 1/2” (qty. 2)
15	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
16	102756-01	Fan Guard
17	102482-01	Plastic Ignitor (transformer)
18	M11084-29	Screw, #10-16 x 3/4” (qty. 2)
19	M51345-03	Fuel Line
20	M51150-200	Fuel Filter
21	M51345-04	Fuel Line Tube
22	M10990-3	Rubber Bushing
23	M50814-03	Air Line

Key No.	Part Number	Description
24	**LOWER SHELL**	
	098511-210	Lower Shell (Yellow)
	098511-211	Lower Shell (White)
	098511-230	Lower Shell (Black)
25	M50104-03	Bushing (qty. 2)
26	M50104-01	Bushing (qty. 2)
27	M11084-27	Screw, #10-16 x 1/2” (qty. 6)
28	M11271-8	Clip Nut (qty. 8)
29	M10908-14	Screw, #8-32 x 3/8” (qty. 1)
30	**FUEL TANK**	
	098513-86	Fuel Tank (B200, R200, REM200)
	098513-88	Fuel Tank (B200T, REM200T, RM200T)
31	097702-01	Fuel Cap (includes gasket)
32	HA3003	Flameout Safety Control
33	M11143-1	Strain Relief Bushing
34	**POWER CORD**	
	098219-19	Power Cord (B200, R200, REM200) 6”
	098219-38	Power Cord (B200T, REM200T, RM200T) 6”
35	102562-01AA	Sidecover (qty. 1)
36	M11084-27	Screw, #10-16 x 1/2” (qty. 4)
37	099125-12	Terminal Board
38	099157-01	Rivet
39	079010-20	Wire Assembly (Red, 18”)
40	M16841-57	Wire Assembly (Red, 6”)
41	M27417	Drain Plug (includes “O” ring)
42	099177-01	Hex Nut, 3/8”-27
43	103523-01	Rubber Bushing
44	**FUEL VALVE ASSEMBLY**	
44-1	105939-01	Fuel Valve (always order with #44-2)
44-2	103129-01	Fuel Valve Bracket
44-3	M12461-13	Hex Head Screw, #8-32 x 1/4” (qty. 2)
44-4	M50820-02	Fitting Barb (qty. 2)
44-5	M11084-38	Hex Tpg Screw, #8-18 x 3/8” (qty. 2)
44-6	WLE-2	Lock Washer (qty. 2)
44-7	079010-31	Wire Assembly (Red)
44-8	079010-32	Wire Assembly (White)
45	097785-04	Foam Gasket (qty. 2)
46	097657-03	Thermostat (thermostat models only)
47	104905-01	Thermostat Knob (thermostat models only)
48	M10908-1	Screw, #6-32 x 1/4”(thermostat models only)(qty. 2
49	099230-01	Screws, Special (qty. 2)
50	M11084-27	Screw, #10-16 x 1/2”(qty. 2)
PARTS AVAILABLE-NOT SHOWN		
	099650-01	Clip (Secures thermostat & power cord wires)
	M9900-192	Combustion Chamber Grounding Wire
	100621-02	Thermostat Decal
	HA2204	Handles (qty. 2 if equipped)
	M12831-3	Wheel Frame Support
	M16801-2	Axle
	097896-01	Wheel with pushnut (qty. 2)
	M28526	Cap Nut (qty. 2)
	M12345-33	Screw, #10-24 x 1 3/4” (qty. 8)
	NTC-3C	Hex Nut, #10-24 (qty. 8)
	HA3017	Filter Kit

Output Rating	200,000 BTU/Hr
Fuel	K1 or No. 1 Fuel Oil
Fuel Tank Capacity	13.5 (US Gal.)
Fuel Consumption	1.4 GPH
Pump Pressure	6 PSI
Electric Requirements	120V/60Hz
Amperage	4.5
Hot Air Output (CFM)	600
Motor RPM	3450
Motor HP	1/4



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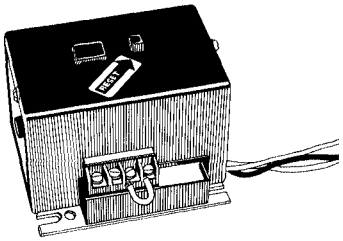
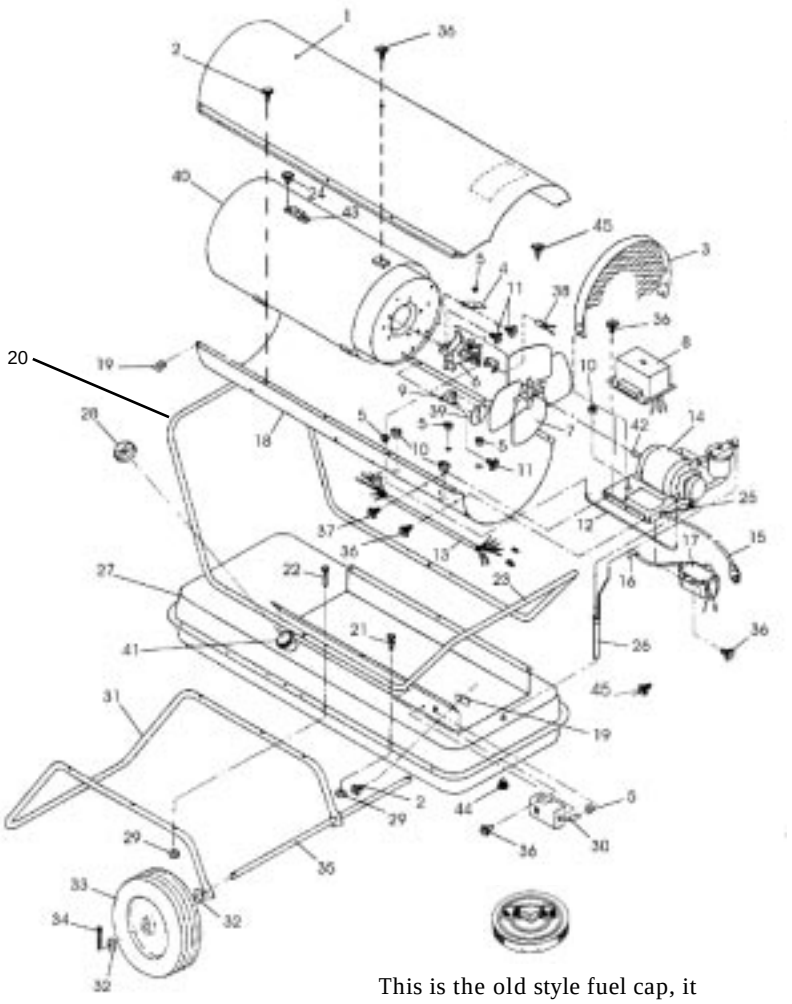
350,000 BTU Forced Air Desa Oil Fired Heater

Model Numbers

Reddy	Master	Knipco
R350	B350	F350
Koehring	**Dayton**	**LB White**
K350	3E358	K350



#M50230 Safety Control for heaters made before 1990. Newer style safety control is on the following page.



This is the old style fuel cap, it is no longer available.

Key No.	Part Number	Description
1	099329-02	Upper Shell (Yellow)
	M50060AC	Upper Shell (White)
2	M11084-27	Screw, #10-16 x 1/2
3	M50097-01AA	Fan Guard
4	M50086	Air Deflector
5	M30865-02	Bushing
6	**Burner Head Assembly-see next page**	
7	M50121	Fan
8	M50230	Safety Control
9	M51336-02	Fan Switch Kit
10	M50104-02	Shorty Bushing (qty. 3)
11	M11084-27	Screw (10-16 x 1/2)
12	M50295	Fuel Line
13	M50391-02	Wire Harness Assembly
14	**Motor & Pump Assembly (see next page)**	
15	098219-19	Extension Cord Assembly
	M10813-88	6 foot Power Cord
16	M50050	Ignition Boot
17	102482-04	Transformer
18	M50061AB	Lower Shell
19	M11271-8	Clip Nut
20	M50062-03	Front Handle
21	M51043-01	Screw
22	HC4-18C	Screw

Key No.	Part Number	Description
23	M50062	Rear Handle
24	M11084-26	Screw (qty. 3)
25	M11143-1	Strain Relief Bushing
26	M50115-04	Fuel Line Assembly
27	098513-05	Fuel Tank Assembly
28	097702-01	Fuel Cap Kit - 2 1/8"
29	NTC-4C	Hex Nut
30	099895-01	Thermostat Assembly
31	M50063	Wheel Support Frame
32	WP-10C	Flat Washer
33	M50389	Wheel
34	C5-10C	Cotter Pin
35	M18774	Axle
36	M11084-26	Screw
37	M10908-27	Screw
38	HA3019	Photocell Assembly
39	M51160-01	Fan Switch Cover
40	M50542-01	Heat Deflector & Comb. Chamber Assy.
41	M18053	Filler Neck Screen
42	M50278	Sleeve
43	M50274	Deflector Brace
44	M27417	Drain Plug
45	NLA	Screw

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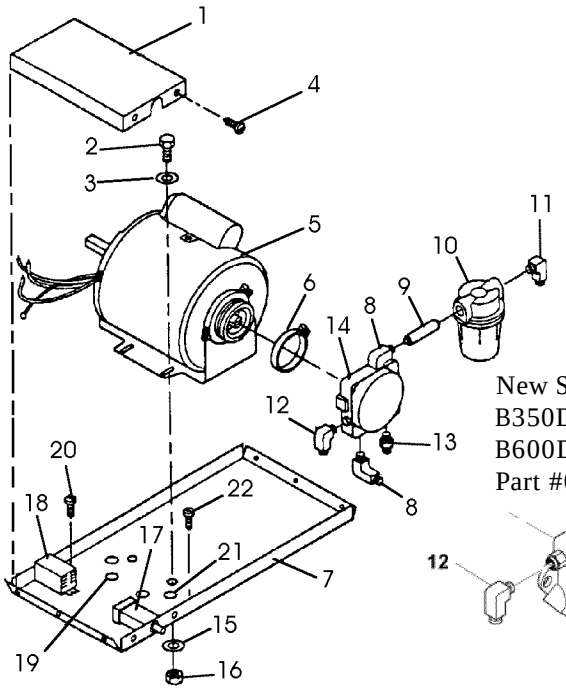
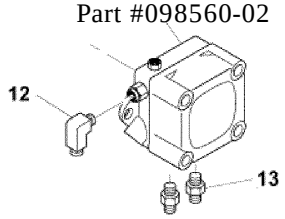
350 & 600,000 BTU Forced Air Desa Oil Fired Heater

Key No.	Part Number	Description
1	097495-02AA	Wiring cover
2	HF5-5C	Screw , 5/16-24 x 5/16 (qty. 4)
3	WLE-5	External lockwasher,5/16 (qty. 4)
4	M11084-26	Screw, #10,16 x 3/8 (qty. 3)
5	099562-01	Motor (350,000 BTU/HR)
	099562-02	Motor (600,000 BTU/HR)
6	M50116	Flange Clamp (holds pump to motor)
7	097506-01AA	Motor support (350,000 BTU/HR)
	097506-02AA	Motor support (600,000 BTU/HR)
8	57413	Street elbow (qty. 2)
9	M17499-2	Pipe nipple
10	098102-01	Fuel filter assembly (small, 3" tall)
	098103-01	Steel filter element(inside fuel filter assembly, includes rubber gaskets)
11	M50114-02	90˚ Male elbow
12	M50297	Compression elbow
13	M50113-02	Straight fitting
14	098560-01	Fuel pump
15	WLM-5C	Lockwasher 5/16 (qty. 4)
16	NPF-5C	Hex nut 5/16-24 (qty. 4)
17	HA3003	Safety control
18	097491-01	Power relay
19	M50104-02	Shorty bushing (qty. 3)
20	M10908-2	Screw, #6-32 x 3/8 (qty. 2)
21	M11143-1	Strain relief bushing
22	097211-01	Screw #8-32 x 1/4

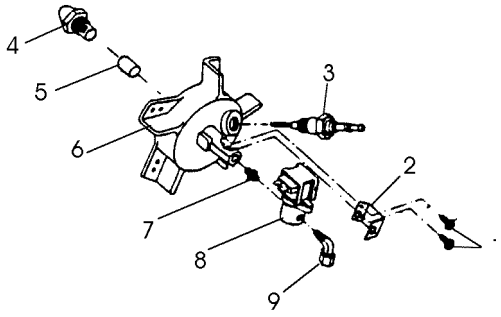


New Style Pump for B350D, R350D, B600D, R600D Part #098560-02



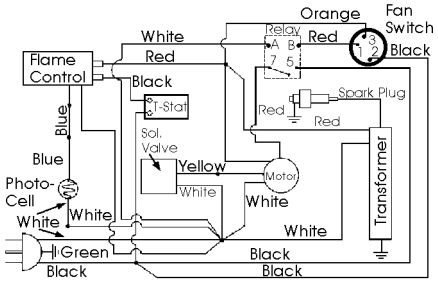
See page 13 for picture of old style fuel filter and filter element

Key No.	Part Number	Description
1	M10908-2	Screw, #6-32 x 3/8 (qty. 2)
2	099229-01	Photocell Bracket
3	M10962-2	Spark plug
4	M50112	Nozzle (350,000 BTU/HR)
	M30765	Nozzle (600,000 BTU/HR)
5	M51170-01	Plug
6	M50924-02	Burner Head Body
7	69246	Straight Nipple
8	M50077	Solenoid Valve
9	M50297	Compression Elbow

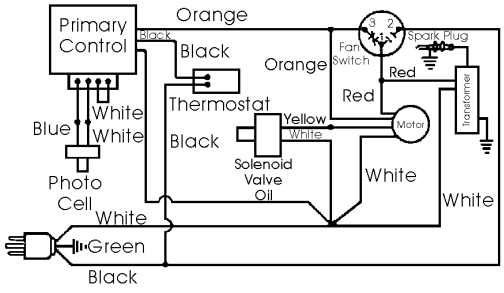


Wiring Diagram for 350,000 & 600,000 BTU

Wiring Diagram with newer style (1990+) Flame Control



Wiring Diagram with White Rogers/ Robertshaw Flame Control



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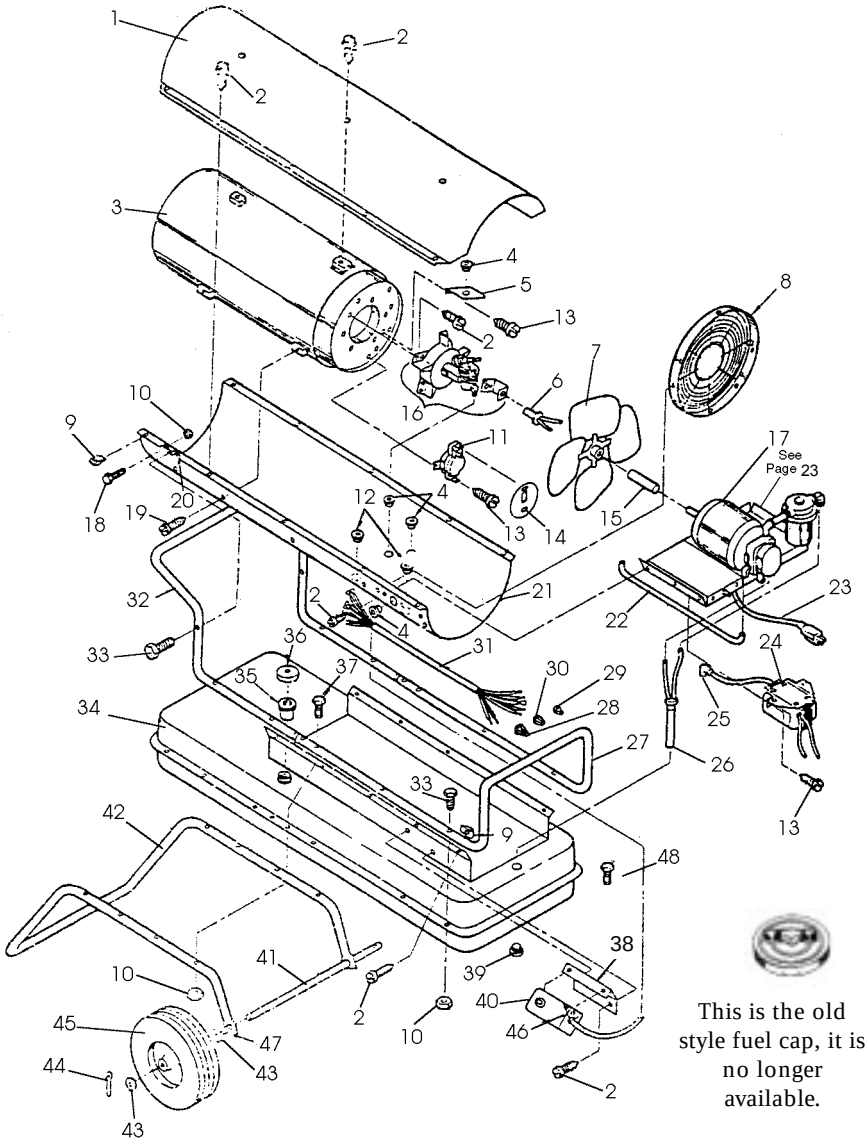
600,000 BTU Forced Air Desa Oil Fired Heater

Model Numbers

Reddy	Master	Knipco
R600	B600	F600
Koehring	**Dayton**	
K600	3E359	

#M50230 Safety Control for heaters made before 1990.



Key No.	Part Number	Description
1	099329-04	Upper Shell (Yellow)
	M50167AC	Upper Shell (White)
2	M11084-27	Screw, #10-16 x 1/2
3	M50543-01	Combustion chamber & shield
4	M30865-02	Bushing
5	M50157	Air Deflector
6	HA3019	Photocell Assembly
7	M50194	Fan
8	M50186-01AA	Fan Guard
9	M11271-8	Clip Nut
10	NTC-4C	Hex Nut, 1/4-20
11	M51336-02	Fan Switch
12	M50104-02	Bushing
13	M11084-26	Screw, #10-16 x 3/8
14	M51160-01	Fan Switch Cover
15	M50278	Sleeve
16	See page 41	Burner Head Assembly
17	See page 39	Motor & Pump Assembly
18	HC4-3C	Screw, 1/4-20 x 3/8
19	M11084-27	Screw, #12-14 x 1/2
20	M50388AB	Support Bracket (Yellow)
	M50388AC	Support Bracket (White)
21	099329-03	Lower Shell (Yellow)
	M50168AC	Lower Shell (White)
22	M50119-01	Fuel line
23	099055-02	Power Cord
	M10813-88	6 foot Power Cord
24	102482-04	Transformer, 5000 Volt
25	M50050	Ignition Boot
26	M50115-02	Fuel Line Assembly
27	M28872-01	Rear Handle
28	*	Wire Connector (large)
29	*	Wire Connector (small)
30	*	Wire Connector (medium)
31	097494-02	Wire Harness
32	M50224	Front Handle
33	M51043-01	Screw, 1/4-20 x 1 1/2

This is the old style fuel cap, it is no longer available.

Key No.	Part Number	Description
34	098513-07	Fuel Tank
35	HA2210	Filler neck screen
36	097702-01	Fuel cap
37	HC4-22C	Screw, 1/4-20 x 2 3/4
38	M25121B	Thermostat bracket
39	M27417	Drain plug
40	099895-01	Thermostat
41	M18774	Axle
42	M28140-02	Wheel Support frame
43	WP-10C	Flat washer 5/8
44	C5-10C	Cotter pin
45	M50389	Wheel
46	Δ	Screw, #6-32 x 3/8
	Δ	Internal lock washer No.6
	Δ	Nut, 6-32
47	M50296	Wheel Spacer

Wiring diagrams are on page 39.

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Figure #1 (Old Style Burner Assembly)

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Key No.	Part Number	Description
1	HA3009	Nozzle: B110A, R110A, REM110A
	HA3011	Nozzle: B150H, R150E, REM150A/D, R155A
2	M10659-1	Nozzle Washer (qty. 2)
3	M10809-1	Nozzle Spring
4	M8882	Nozzle Sleeve
5	M50924-04	Burner Head: B110A, R110A, REM110A
	M50924-06	Burner Head: B150H, R150E, REM150A/D, R155A
6	M50820-02	Barb Fitting (qty. 2)
7	102548-02	Glowbar Ignitor
8	M10908-2	Screw, #10-16 x 1/2"

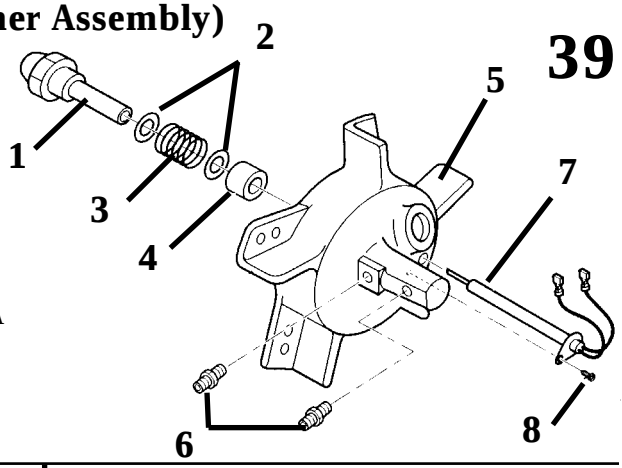
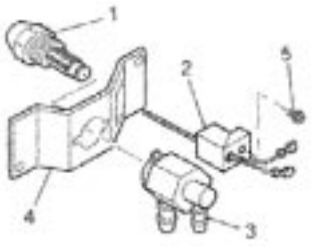


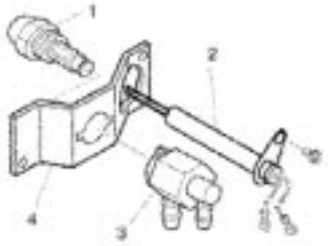
Figure #2 (Newer Style Burner Assembly)

40



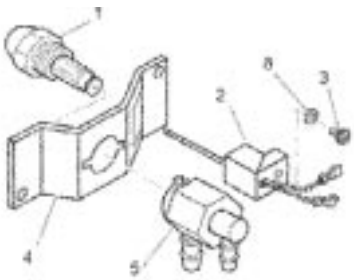
40/50/55/60/70 MODELS WITH HA1000 IGNITOR

Key#	Part	Description
1	HA3006	Nozzle Assembly (40)
	HA3024	Nozzle Assembly (50/55/60)
	HA3026	Nozzle Assembly (70)
2	HA1000	Ignitor Kit
3	104056-01	Nozzle Adapter
4	102336-01	Nozzle Adapter Bracket
5	M10908-75	Screw, Hex Head, Tapping
6	103347-01	Belleville Washer



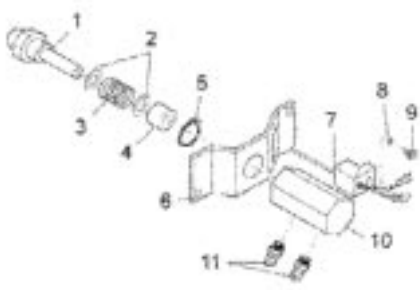
50/55/60 MODELS WITH 102548-08 IGNITOR

Key#	Part	Description
1	HA3024	Nozzle Assembly
2	HA1100	Ignitor Kit
3	102336-05	Nozzle Adapter Bracket
4	104056-01	Nozzle Adapter



110/115/155/165 MODELS

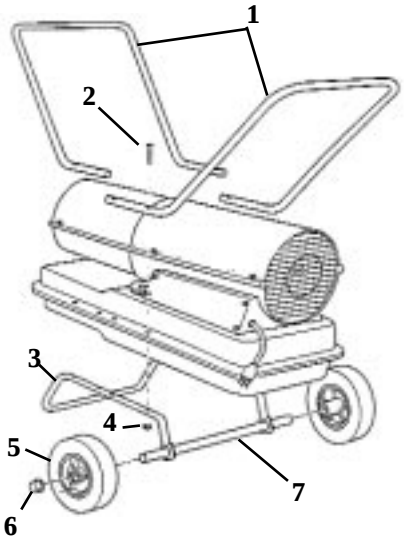
Key#	Part	Description
1	HA3027	Nozzle Assembly (110/115)
	HA3028	Nozzle Assembly (155/165)
2	HA1000	Ignitor Kit
3	M10908-75	Screw, #6-32 x 7/8"
4	102336-01	Nozzle Adapter Bracket
5	104054-01	Nozzle Adapter
6	103347-01	Washer



200 MODELS

Key#	Part	Description
1	100735-13	Nozzle Assembly
2	M10659-1	Nozzle Washer (qty. 2)
3	M10809-1	Nozzle Spring
4	M8882	Nozzle Sleeve
5	107272-01	Retaining Ring
6	102336-03	Nozzle Adapter Bracket
7	HA1000	Ignitor Kit
8	103347-01	Belleville Washer
9	M10908-75	Screw, #6-32 x .88
10	107273-01	Nozzle Adapter
11	M50820-02	Barb Fitting

Handle & Wheel Kit Assembly



Key No.	Part Number	Description
1	HA2203	Handle (110-115,000) (qty. 2)
	HA2204	Handle (150-165,000) (qty. 2)
2	M12345-33	Screw, #10-24 x 1 3/4" (qty. 8)
3	M12342-3	Wheel support frame (110-115,000)
	M12831-3	Wheel support frame (150-165,000)
4	NTC-3C	Hex Nut, #10-24 (qty. 8)
5	097896-01	Wheel (white) with push nut (qty. 2)
	107426-01	Wheel (black) with push nut (qty. 2)
6	M28526	Cap nut (qty. 2)
7	M51015-01	Axle (110-115,000)
	M16801-2	Axle (150-165,000)

PARTS AVAILABLE NOT SHOWN

105880-02	Fuse for 104068-02 ignition control
HA1180	Low pressure gauge
HA1210	Remote thermostat (most accurate)
PT100HTST	Remote thermostat (high-low)
103814-01	Wire tie-groups wires connected to ignition control assembly
HA3004	1/2" rotor kit
HA3017	Filter kit
HA3020	Pump kit
HA1170	Safety control/photocell tester

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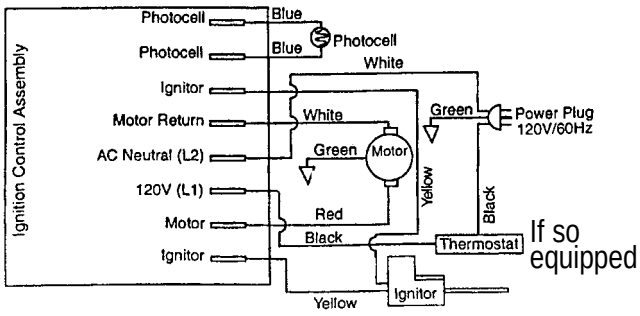
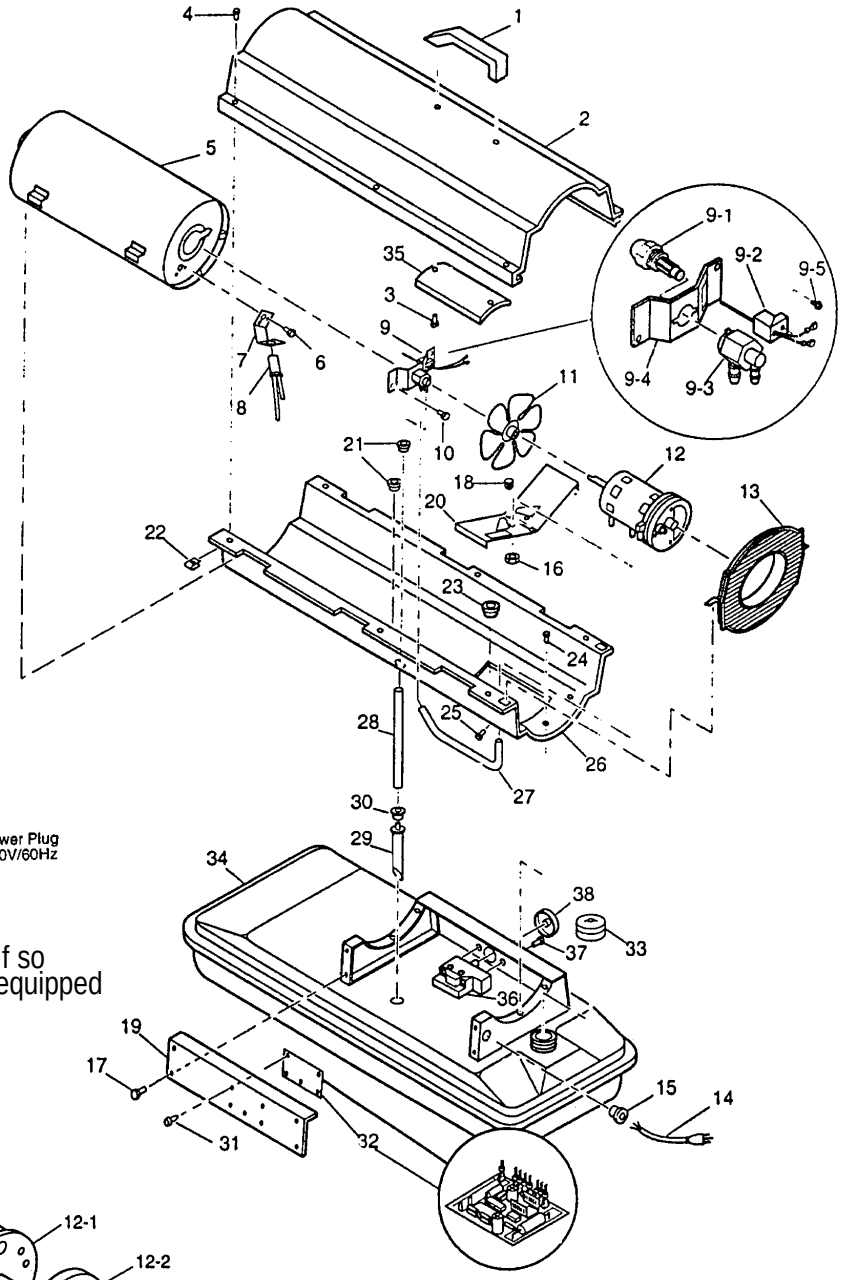
35,000-70,000 BTU Forced Air Desa Oil Fired Heater
(Hot Surface Ignition)

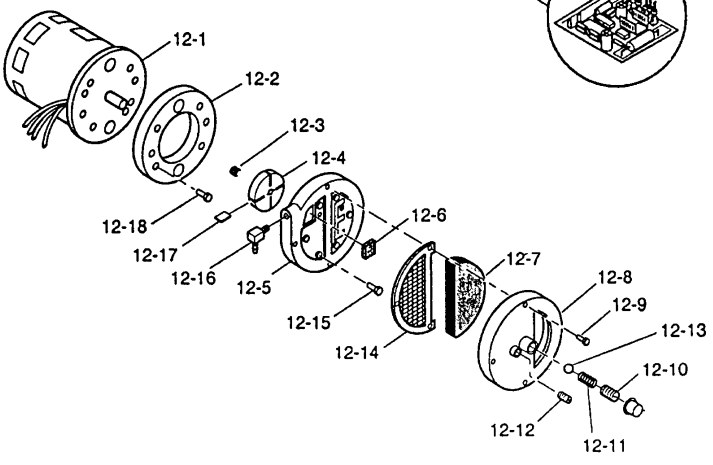
Model Numbers

Reddy	Remington	Master
R35D	REM35B	B50H
R35E	REM35C	B55T
R40	REM40	B60
R40T	REM50C	B70D
R55A	REM55A	B70DT
R55B	REM55B	
R55BT	REM55BT	
R60	REM60	
RM60		
R70D		
R70DT		

WIRING DIAGRAM WITH THERMOSTAT







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35,000-70,000 BTU Forced Air Desa Oil Fired Heater

Key No.	Part Number	Description
1	M51104-01	Handle
2	098511-67	Upper Shell (Available in black only)
3	M11084-29	Screw, #10-16 x 3/4”
4	100647-01	Screw, #10-16 x 1/2”
5	098512-47	Combustion Chamber (35,000 BTU’s)
	098512-58	Combustion Chamber (40,000 BTU’s)
	098512-39	Combustion Chamber (50,000 BTU’s)
	098512-50	Combustion Chamber (55-60,000 BTU’s)
	098512-51	Combustion Chamber (70,000 BTU’s)
6	M10908-2	Screw, #6-32 x 3/8”
7	103154-03	Photocell Bracket
8	M16656-24	Photocell Assembly
9	**BURNER HEAD ASSEMBLY**	
9-1	HA3006	Nozzle (35-40,000)
	HA3021	Nozzle (50-55,000)
	HA3024	Nozzle (R55BT, 60,000)
	HA3026	Nozzle (70,000)
9-2	HA1000	Ignitor Kit/Glowbar
9-3	079980-01	Nozzle Adapter (35,50,55,000)
	104056-01	Nozzle Adapter (40,60,70,000)
9-4	102336-02	Nozzle Adapter Bracket(Rem 55BT only)
	102336-01	Nozzle Adapter Bracket(All others)
9-5	M11084-42	Screw,#10-20 x 3/4” (35,50,55,000)
	104023-01	Screw/Washer Assembly (40,60,70,000)
10	M11084-26	Screw, #10-16 x 3/8”
11	**Fan**	
	M30884	(R35D,R35E,R55A,REM35B,REM50C, REM55A,B50H)
	103684-01	B70DT & R70DT and All Remaining Non 70,000 BTU Models
	M29678	All Other 70,000 BTU Models
12	**MOTOR & PUMP ASSEMBLY**	
12-1	102001-01	All Non 70,000 BTU Models
	102001-21	All 70,000 BTU Models
12-2	079975-02	Pump Body Ring (35,40,70,000) 1/2” thick
	079975-03	Pump Body Ring (50,55,60,000) 5/8” thick
12-3	M22009	Rotor Insert
12-4	M22456-1	Rotor 1/2” (35,40,70,000 BTU)
	M22456-2	Rotor 5/8” (50,55,60,000 BTU)
12-5	M29608	Pump End Cover (Metal)
12-6	M29632	Lint Filter
12-7	M29633	Intake Filter (sponge)
12-8	M29609	Filter End Cover (Plastic)
12-9	M12461-31	Screw, #10-32 x 1”
12-10	M27694	Adjusting Screw
12-11	M10993-1	Pressure Relief Spring
12-12	M22997	Plug
12-13	M8940	Steel Ball, 1/4” Diameter
12-14	M29612-01	Output Filter
12-15	M12461-31	Screw, #10-32 x 1” (35,40,50,55,70,000)
	M12461-32	Screw, #10-32 x 1 1/8” (R55BT, 60,000)
12-16	M50016	Elbow (35,50,55,000)
	103676-01	Elbow (40,R55BT,60,70,000)
12-17	M8643	1/2” Vane-Set of 4 (35,40,70,000)
	M8643-2	5/8” Vane-Set of 4 (50,55,60,000)
12-18	FHPF3-5C	Screw, #10-32 x 5/8” (35,40,55,60,000)
	FHPF3-6C	Screw, #10-32 x 3/4” (50,55,60,000)
13	M51105-01	Fan Guard
14	098219-31	Power Cord Non-Thermostat Models 6”
	098219-38	Power Cord Thermostat Models
15	M11143-1	Strain Relief Bushing
16	NTC-4C	Hex Lock Nut, 1/4-20

Key No.	Part Number	Description
17	107992-01	Screw, #10-16 x 3/8”
18	M50631	Rubber Bumper
19	097461-03AA	Side Cover-All Pre-2001 Models
	097461-09	Side Cover-2001 Models-Present
20	101205-01	Motor Bracket
21	M30865-02	Bushing-All Pre-2001 Models
	M50104-06	Bushing-2001 Models-Present
22	M11271-8	Clip Nut
23	M50104-02	Bushing
24	M11084-26	Screw, #10-16 x 3/8”
25	M10908-14	Screw, #8-32 x 3/8”
26	098511-234	Lower Shell (Available in black only)
27	M29652-04	Rubber Airline (R35D, R35E, R55A, REM35B, REM50C, REM55A,B50H)
	M50814-06	Rubber Airline (All Others)
28	M29652-05	Fuel Line (All 35,000 BTU’s)
	079973-01	Fuel Line (All Others)
29	M50876-04	Fuel Filter w/Bushing (All 35,40,000)
	M50876-02	Fuel Filter w/Bushing (All 50,000)
	M50876-05	Fuel Filter w/Bushing (All 55-70,000)
30	M10990-3	Rubber Bushing
31	102349-01	PCB Support
32	104068-02	Ignition Control Assy
33	097702-01	Fuel Cap with Gasket
34	108088-01	Fuel Tank (35,40,000)
	108088-02	Fuel Tank (50,000)
	108088-03	Fuel Tank (55,000-70,000)
35	M51108-01	Shell, Heat Shield
36	097657-03	Thermostat (All 70,000 BTU Units)
	104458-01	Thermostat (All 55,000 BTU Units)
37	M10908-01	Screw, #6-32 x 1/4” (All 70,000 BTU Units)
	M12461-18	Screw, #6-32 x 1/4”(All Other Units)
38	104905-01	Thermostat Knob (All 70,000 BTU Units)
	104460-01	Thermostat Knob (All Other Units)
PARTS AVAILABLE - NOT SHOWN		
	097204-01	Tradename Decal (R35D)
	097764-01	Tradename Decal (REM35B)
	097964-02	Tradename Decal (REM50C)
	097646-01	Tradename Decal (B50H)
	097204-08	Tradename Decal (R55A)
	097764-05	Tradename Decal (REM55A)
	097204-18	Tradename Decal (R55BT)
	097204-03	Tradename Decal (R70D)
	097646-02	Tradename Decal (B70D, B70DT)
	097204-14	Tradename Decal (R70DT)
	100621-06	Thermostat Decal (R55BT, R70DT, B70DT)
	103814-01	Wire Tie (groups wires connected to ignition control assembly, all models)
	098493-01	General Information Decal
	099650-01	Wire Clips (secures wires of thermostat, All thermostat models)
OPTIONAL ACCESSORIES		
	HA1210	Remote Thermostat (more accurate)
	PT100HTST	Remote Thermostat (warmer/cooler dial)
	HA1202	Heavy Duty Wheel & Handle Kit (All Models)
	HA1206	Standard Duty Wheel & Handle Kit (All models)
	HA1180	Air Gauge Kit (All models)
	HA3014	Filter Kit
	HA1170	Ignition Control/Photo Cell Tester

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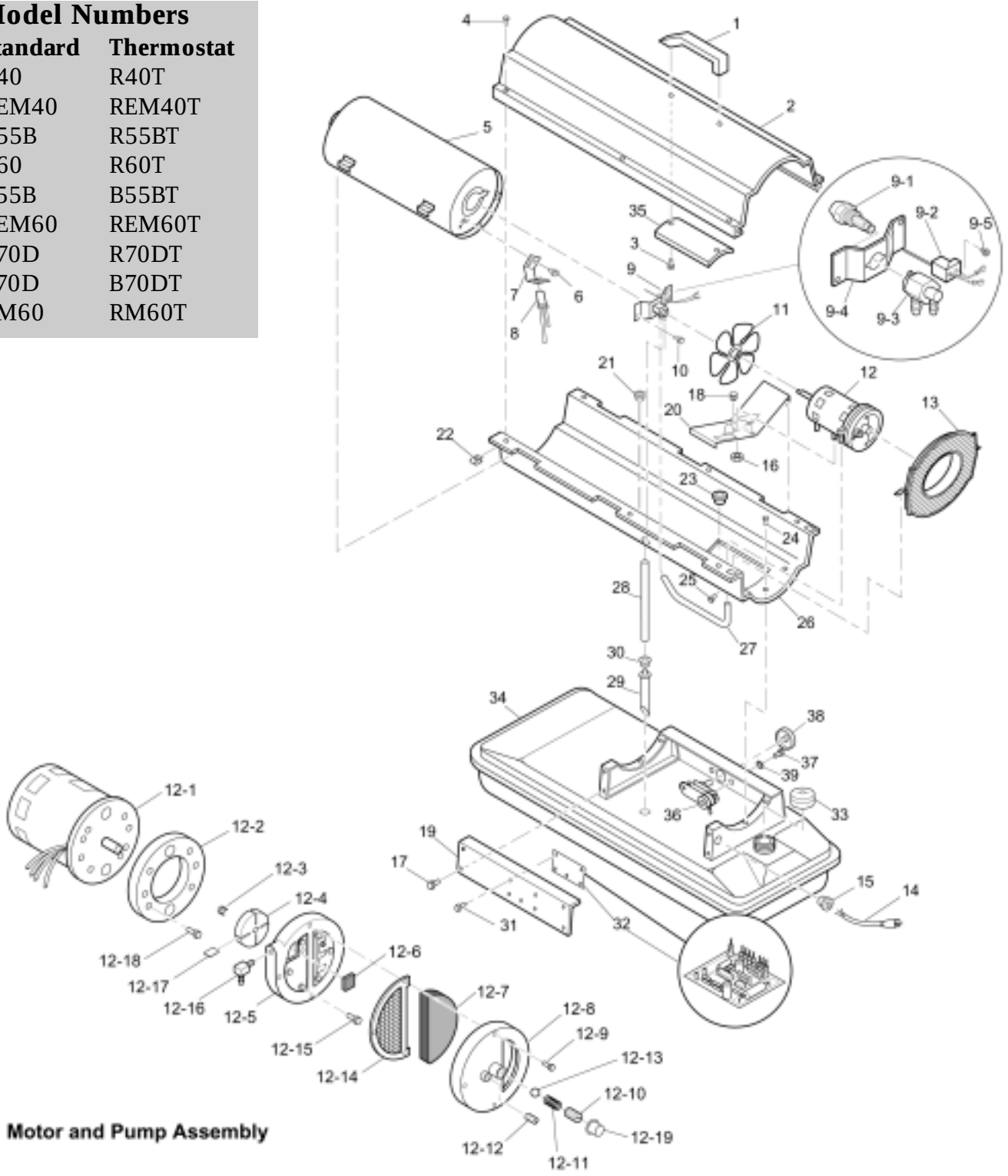
40,000-70,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

Model Numbers	
Standard	**Thermostat**
R40	R40T
REM40	REM40T
R55B	R55BT
R60	R60T
B55B	B55BT
REM60	REM60T
R70D	R70DT
B70D	B70DT
RM60	RM60T



Motor and Pump Assembly

Desa 40-70,000 BTU HSI

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40,000-70,000 BTU Forced Air Desa H.S.I. Oil Fired Heater

Key No.	Part Number	Description
1	M51104-01	Handle
2	098511-67	Upper Shell (Service Part Will Be Black)
3	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
4	M15823-27	Screw, #10-16 x 1 1/2" (qty. 6)
5	098512-58	Combustion Chamber (40)
	098512-50	Combustion Chamber (55/60)
	098512-51	Combustion Chamber (70)
6	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
7	103154-03	Photocell Bracket
8	M16656-24	Photocell Assembly
9	Δ	Burner Head Assembly
9-1	HA3006	Nozzle Assembly (40)
	HA3024	Nozzle Assembly (55/60)
	HA3026	Nozzle Assembly (70)
9-2	102548-03	Ignitor Kit
9-3	104056-01	Nozzle Adapter
9-4	102336-01	Nozzle Adapter Bracket
9-5	M10908-75	Screw, Hex Head, Tapping
9-6	103347-01	Belleville Washer
10	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
11	103684-01	Fan (40/55/60)
		M29678 Fan (70)
12	Δ	Motor and Pump Assembly
12-1	102001-28	Motor (40/55/60)
	102001-29	Motor (70)
12-2	079975-03	Pump Body (55/60)
	079975-02	Pump Body (40/70)
12-3	M22009**, ***	Insert
12-4	M22456-2**	Rotor (55/60)
	M22456-1***	Rotor (40/70)
12-5	M29608	Pump End Cover
12-6	M29632 +	Lint Filter
12-7	M29633 +	Intake Filter
12-8	M29609	Filter End Cover
12-9	M12461-31	Screw, #10-32 x 1" (qty. 3)
12-10	M27694 ^	Adjusting Screw
12-11	M10993-1 ^	Pressure Relief Spring
12-12	M22997 ^	Plug
12-13	M8940 ^	Steel Ball, 1/4" Diameter
12-14	M29612-01 +	Output Filter
12-15	M12461-32	Screw, #10-32 x 1 1/8" (55/60) (qty. 6)
	M12461-31	Screw, #10-32 x 1" (40/70) (qty. 6)
12-16	103676-01	Nylon Elbow, 90°
12-17	M8643-2**	Blade (55/60) (qty. 4)
	M8643***	Blade (40/70) (qty. 4)
12-18	FHPF3-6C	Screw, #10-32 x 3/4" (55/60) (qty. 2)
	FHPF3-5C	Screw, #10-32 x 5/8" (40/70) (qty. 2)
12-19	105780-01	Plastic Cap
13	M51105-01	Fan Guard
14	098219-38	Power Cord 6”
15	M11143-1	Strain Relief Bushing
16	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
17	M11084-26	Screw, #10-16 x 3/8" (qty. 8)
18	M50631	Rubber Bumper (qty. 2)
19	097461-16	Side Cover (qty. 2)
20	101205-01	Motor Bracket
21	M50104-06	Bushing
22	M11271-8	Clip Nut (qty. 6)
23	M50104-02	Bushing
24	M11084-26	Screw, #10-16 x 3/8" (qty. 6)
25	M10908-14	Screw, #8-32 x 3/8"
26	098511-234	Lower Shell (Service Part Will Be Black)
27	M50814-06	Rubber Airline
28	079973-01	Fuel Line
29	M50876-04	Fuel Filter with bushing (40)
	M50876-05	Fuel Filter with bushing (55/60/70)
30	M10990-3	Rubber Bushing
31	102349-01	PCB Support (qty. 5)
32	104068-02	Ignition Control Assembly
33	097702-01	Fuel Cap (Includes Gasket)
	097663-04	Fuel Gauge (Includes Gasket RM60 Only, If Equipped)
34	108088-01	Fuel Tank (40)
	108088-03	Fuel Tank (55/60/70)
	108088-16	Fuel Tank (RM60 Only, if Equipped with Fuel Gauge)
35	M51108-01	Shell Heat-Shield
36	104458-01	Thermostat
37	M12461-18	Screw, #8-32 x 7/8"
38	104460-01	Thermostat Knob
39	WLE-2	Lock Washer, EXT #8

PARTS AVAILABLE - NOT SHOWN

103814-01	Wire Tie (For Ignition Control Assembly)
M9900-170	Wire Assembly (Thermostat to Ignition Control Assembly)

Δ Not available as an assembly
+ Included in Filter Kit (Part No. HA3014)
** Included in Rotor Kit (Part No. HA3005)
^ Included in Pump Adjustment Kit (Part No. HA3020)
*** Included in Rotor Kit (Part No. HA3004)

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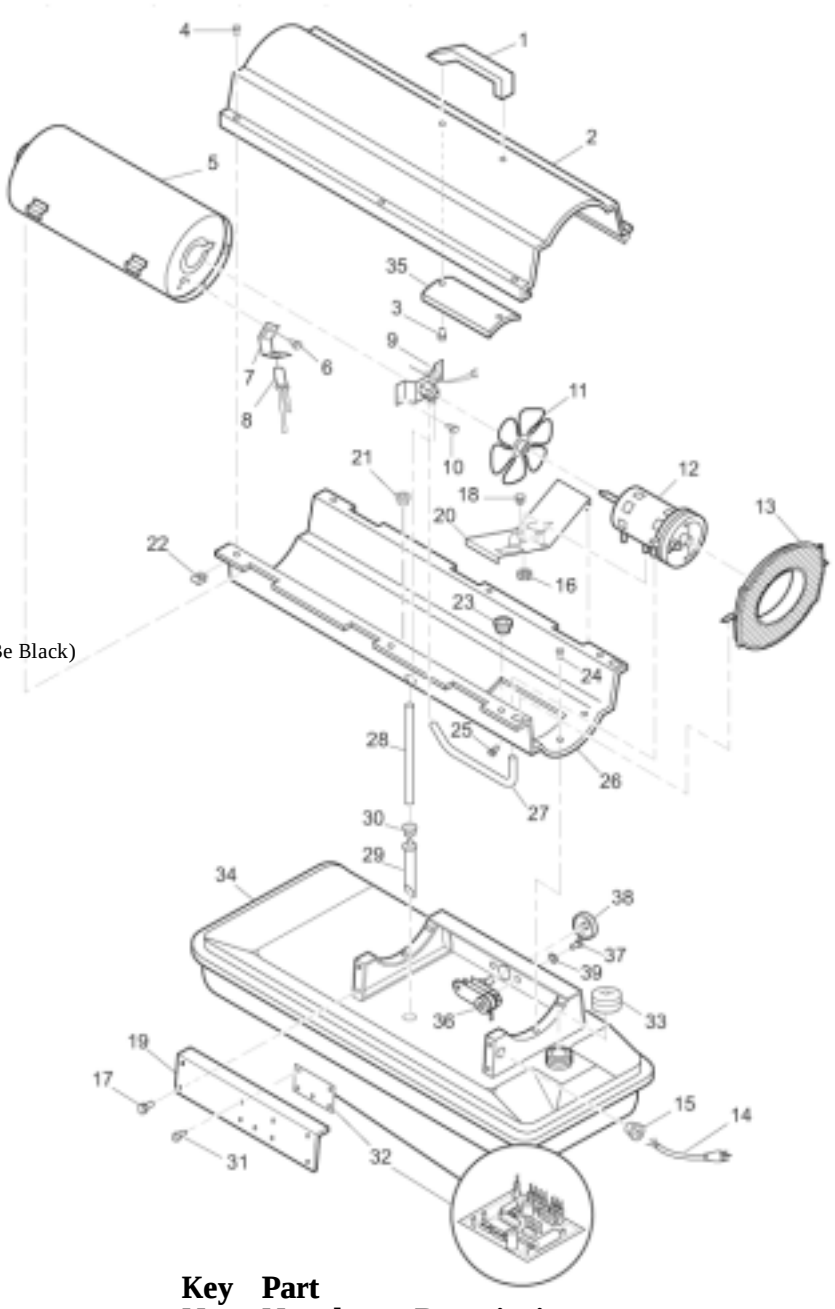
40,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

Model Numbers	
Standard	**Thermostat**
R40	R40T
REM40	REM40T
PK40	PK40T
UK40	UK40T
TK40	TK40T
N40	N40T



Key No.	Part Number	Description
1	M51104-01	Handle
2	098511-67	Upper Shell (Service Part Will Be Black)
3	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
4	M15823-27	Screw, #10-16 x 1 1/2" (qty. 6)
5	098512-58	Combustion Chamber
6	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
7	103154-03	Photocell Bracket
8	M16656-24	Photocell Assembly
9	(See page 41)	Burner Head Assembly
10	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
11	103684-01	Fan
12	(See page 44)	Motor and Pump Assembly
13	M51105-01	Fan Guard
14	098219-38	Power Cord
15	M11143-1	Strain Relief Bushing
16	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
17	M11084-26	Screw, #10-16 x 3/8" (qty. 8)
18	M50631	Rubber Bumper (qty. 2)
19	097461-16	Side Cover (qty. 2)
20	101205-01	Motor Bracket
21	M50104-06	Bushing
22	M11271-8	Clip Nut (qty. 6)
23	M50104-02	Bushing
24	M11084-26	Screw, #10-16 x 3/8" (qty. 6)
25	M10908-14	Screw, #8-32 x 3/8"
26	098511-234	Lower Shell (Service Part Will Be Black)
27	M50814-06	Rubber Airline
28	079973-01	Fuel Line
29	M50876-04	Fuel Filter with bushing
30	M10990-3	Rubber Bushing
31	102349-01	PCB Support (qty. 5)
32	104068-02	Ignition Control Assembly
33	097702-01	Fuel Cap (Includes Gasket)

Key No.	Part Number	Description
34	108088-01	Fuel Tank
35	M51108-01	Shell Heat-Shield
36	104458-01	Thermostat
37	M12461-18	Screw, #8-32 x 7/8"
38	104460-01	Thermostat Knob
39	WLE-2	Lock Washer, EXT #8

PARTS AVAILABLE - NOT SHOWN

	103814-01	Wire Tie
	M9900-170	Wire Assembly

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50 - 70,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

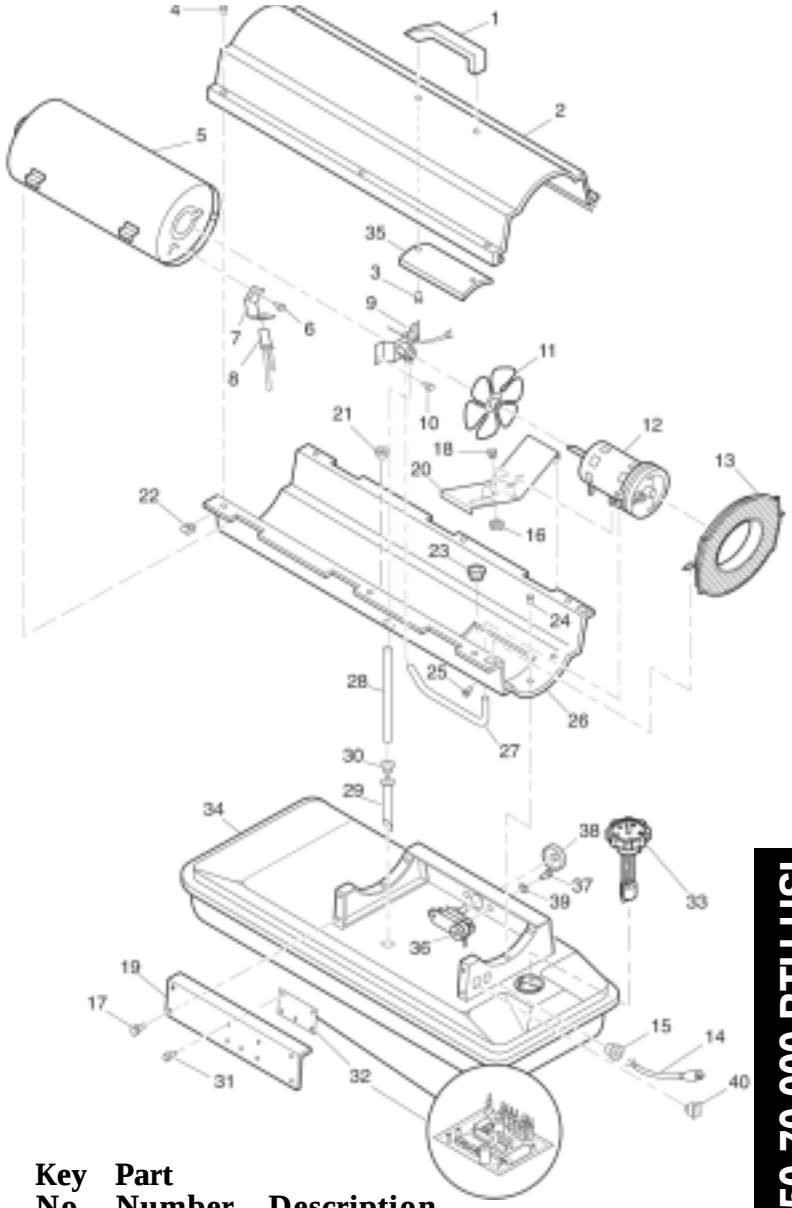
Model Numbers

Standard

R50	PK60	**RM60A**	B70E
REM50	UK60	PK70	UK70
R55C	R60A	PK55	UK55
TK55	B55C	REM60A	R70E

Thermostat

R50T	PK60T	**RM60T**	B70ET
REM50T	UK60T	PK70T	UK70T
R55CT	R60AT	PK55T	UK55T
TK55T	B55CT	REM60AT	R70ET



Key No.	Part Number	Description
1	M51104-01	Handle
2	098511-67	Upper Shell (Service Part Will Be Black)
3	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
4	M1582 3-27	Screw, #10-16 x 1 1/2" (qty. 6)
5	098512-50	Combustion Chamber (50/55/60) for use with Ignitor HA1000
	098512-76	Combustion Chamber (50/55/60) for use with Ignitor 102548-08
	098512-51	Combustion Chamber (70)
6	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
7	103154-03	Photocell Bracket
8	M16656-24	Photocell Assembly
9	(See page 41)	Burner Head Assembly
10	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
11	103684-01	Fan (50/55/60)
	M29678	Fan (70)
12	(See page 42)	Motor and Pump Assembly
13	M51105-01	Fan Guard
14	113065-01	Power Cord
15	M11143-1	Strain Relief Bushing
16	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
17	M11084-26	Screw, #10-16 x 3/8" (qty. 8)
18	M50631	Rubber Bumper (qty. 2)
19	097461-16	Side Cover (qty. 2)
20	101205-01	Motor Bracket
21	M50104-06	Bushing
22	M11271-8	Clip Nut (qty. 2)
23	M50104-02	Bushing
24	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
25	M10908-14	Screw, #8-32 x 3/8"
26	098511-234	Lower Shell (Service Part Will Be Black)
27	M50814-06	Rubber Airline
28	079973-01	Fuel Line
29	M50876-05	Fuel Filter with bushing
30	M10990-3	Rubber Bushing
31	102349-01	PCB Support (qty. 2)

Key No.	Part Number	Description
32	104068-02	Ignition Control Assembly
33	097663-04	Fuel Cap w/ Gauge (includes Gasket) (Use with Fuel Tank 108088-16)
	113280-01	Fuel Cap w/ Gauge (includes Gasket) (Use with Fuel Tank 113279-01)
34	108088-16	Fuel Tank (Metal Filler Neck)
	113279-01	Fuel Tank (Plastic Filler Neck)
35	M51108-01	Shell Heat-Shield
36	104458-01	Thermostat
37	M12461-18	Screw, #8-32 x 7/8"
38	104460-01	Thermostat Knob
39	WLE-2	Lock Washer, EXT #8
40	113461-01	ON/OFF Switch

PARTS AVAILABLE - NOT SHOWN

103814-01 Wire Tie (For Ignition Control Assembly) 1

M9900-170 Wire Assembly (Thermostat to Ignition Control Assembly)

1079010-46 Wire Assembly (Connects Switch to Thermostat or Ignition

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110-165,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

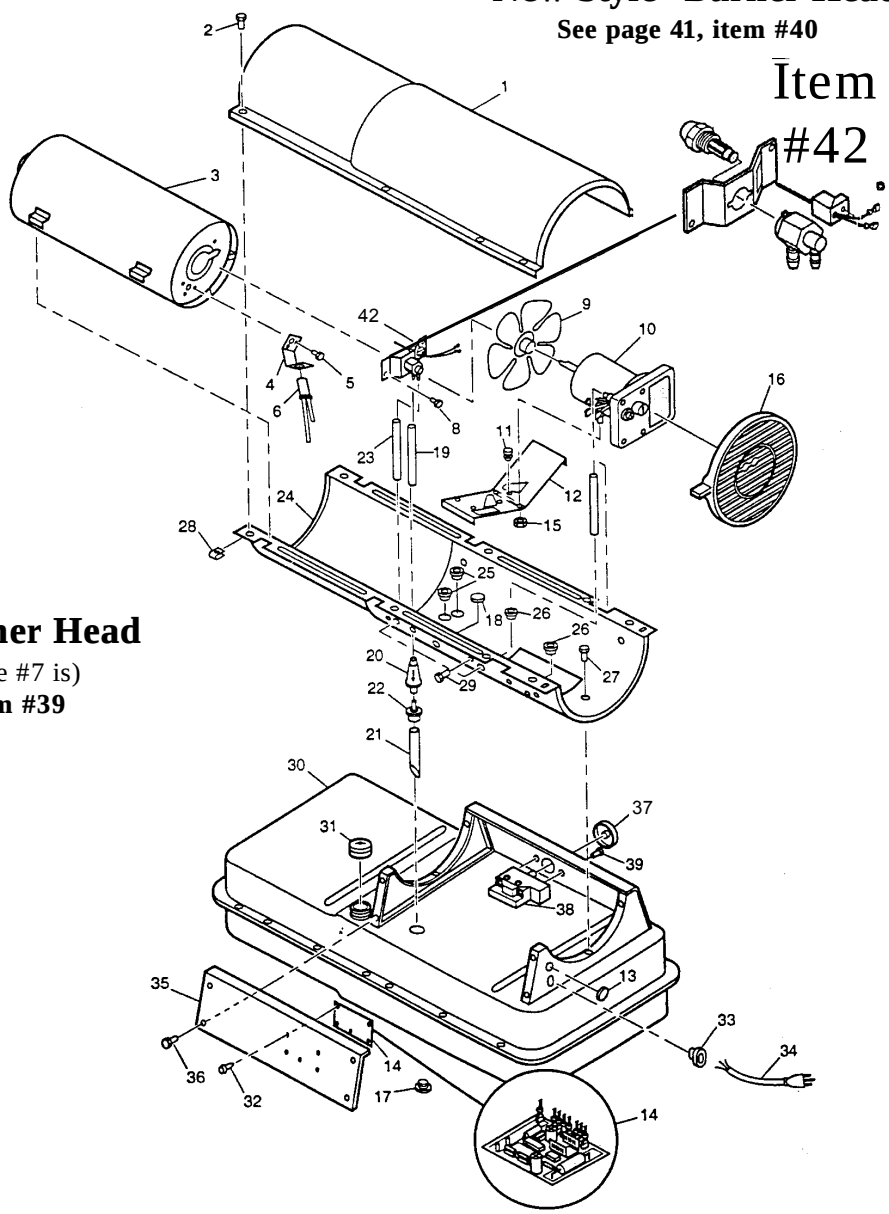
Model Numbers

Reddy	Remington	Master
R110A	REM110A	B110A
R110B	REM110B	B110B
R110BT	REM110BT	B110BT
R115	REM115	B115T
RM115	REM115T	B150H
RM115T	REM150D	B150J
R150E	REM150E	B150JT
R155A	REM155A	B150JT
R155B	REM155B	B155T
RM155		B165AT
R165A	**L.B. White**	
R165AT	K155	

"New Style" Burner Head

See page 41, item #40

Item #42

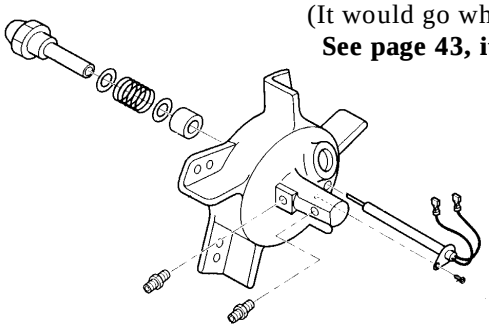


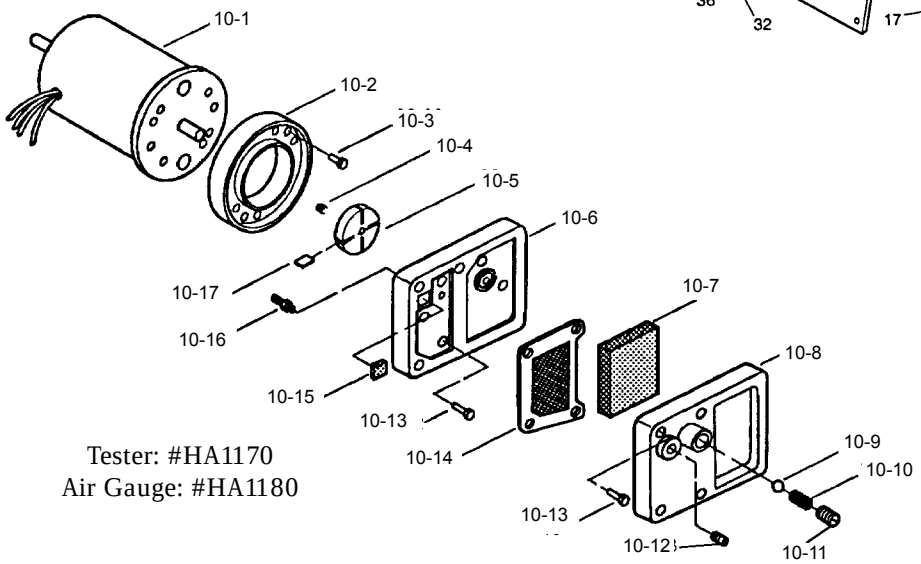
Item #41

"Old Style" Burner Head

(It would go where #7 is)

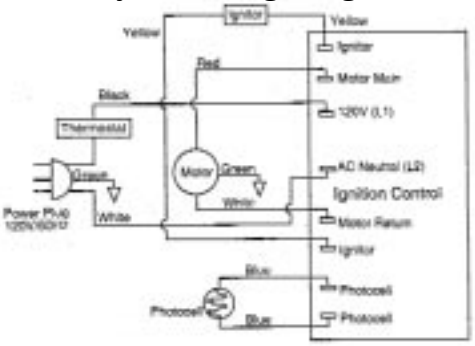
See page 43, item #39





Tester: #HA1170
Air Gauge: #HA1180

"New Style" Wiring Diagram



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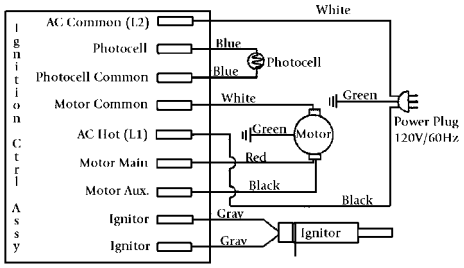
110-165,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

Key No.	Part Number	Description
1	098511-66	Upper Shell (Replacement part will be black)
2	100647-01	Screw, #10-16 x 1/2" (qty. 8)
3	**Combustion Chambers**	
	098512-45	B110, R110A, REM110A
	098512-54	All other 110,000 - 115,000 units
	098512-46	B150H, R150E, REM150D, R155, R155A, REM155A
	098512-59	All other 150,000 - 155,000 units
	098512-60	All 165,000 units
4	**Photocell Bracket**	
	M16660	B110A, R110A, REM110A
	103971-01	All other 110,000 - 115,000 units
	103154-05	All other 150,000 - 165,000 units
5	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
6	M16656-24	Photocell
8	M11084-27	Screw, #10-16 x 1/2" All "old style" burner head models (qty. 3)
	107992-01	Screw, #10-16 x 3/8" All "new style" burner head models (qty. 2)
9	**Fan**	
	097293-01	All 110,000 - 115,000 units and B150H, R150E, REM150D, R155, R155A, REM155A
	102042-01	All others
10	**MOTOR & PUMP ASSEMBLY**	
10-1	**Motor**	
	097308-06	B110A, R110A, REM110A, B150H, R150E, REM150D, R155, R155A, REM155A
	102001-21	All others
10-2	079975-02	1/2" Pump Body Ring (metal)
10-3	FHPF3-5C	Screw, #10-32 x 5/8" (qty. 2)
10-4	M22009	Rotor Insert
10-5	M22456-1	1/2" Rotor
10-6	M50545	Metal Pump End Cover
10-7	M12179	Foam Intake Filter
10-8	M16545	Plastic End Cover
10-9	M8940	Steel Ball, 1/4" diameter
10-10	M10993-1	Relief Spring
10-11	M27694	Pressure Adjusting Screw
10-12	M22997	Plug
10-13	M12461-31	Screw, #10-32 x 1" (qty. 10)
10-14	M12244-1	Output Filter
10-15	M11637	Lint Filter
10-16	**Barb Fitting**	
	M50820-02	Brass
	104096-01	Nylon
	105880-02	Ignition Control Fuse
10-17	M8643	1/2" Blade (Vanes) (Come in set of 4)\
11	M50631	Rubber Bumper (qty. 2)
12	101206-01	Motor Mounting Bracket
13	099213-01	Button Plug
14	**Ignition Control Assembly**	
	104065-01	B110A, R110A, REM110A, B150H, R150E, REM150A, R155, R155A, REM155A
	104068-02	All others (fuse part# 105880-02)
15	NTC-4C	Hex Lock nut, 1/4-20 (qty 2)
16	M51114-01	Fan Guard
17	M27147	Drain Plug
18	099213-01	Button Plug

Key No.	Part Number	Description
19	**Fuel Line**	
	M51345-01	B110A, R110A, REM110A, B150H, R150E, REM150D, R155, R155A, REM155A
	M51345-06	All others
20	M51150-01	Fuel Filter
21	**Fuel Line Tube**	
	M51151-01	All 110,000 - 115,000 units
	M51151-02	All 150,000 - 165,000 units
22	M10990-3	Rubber Bushing
23	M50814-03	Air Line
24	098511-236	Lower Shell (replacement part will be black)
25	M50104-03	Bushing (qty. 2)
26	M50104-01	Bushing (qty. 2)
27	M11084-27	Screw, #10-16 x 1/2" (qty. 6)
28	M11271-8	Clip Nut (qty. 8)
29	M10908-14	Screw, #8-32 x 3/8" (qty. 1)
30	**Fuel Tank**	
	108088-04	All 110,000 - 115,000 units
	108088-05	All 150,000 - 165,000 units
31	097702-01	Fuel Cap (includes gasket)
32	102349-01	PC Board Support (qty. 5)
33	M11143-1	Strain Relief Bushing
34	098219-38	Power Cord
35	M51077-09AA	Side Cover
36	M11084-27	Screw, #10-16 x 1/2" -till 2000 (qty. 4)
	M11084-26	Screw, #10-16 x 1/2" -2000 on
37	104905-01	Thermostat knob
38	097657-03	Thermostat
39	M10908-2	Screw, #6-32 x 1/4" (qty. 2)
41	Old Style Burner Assembly - see page 41	
42	New Style Burner Assembly - see page 41	

Burner Assemblies are on page 43.

"Old Style" Wiring Diagram



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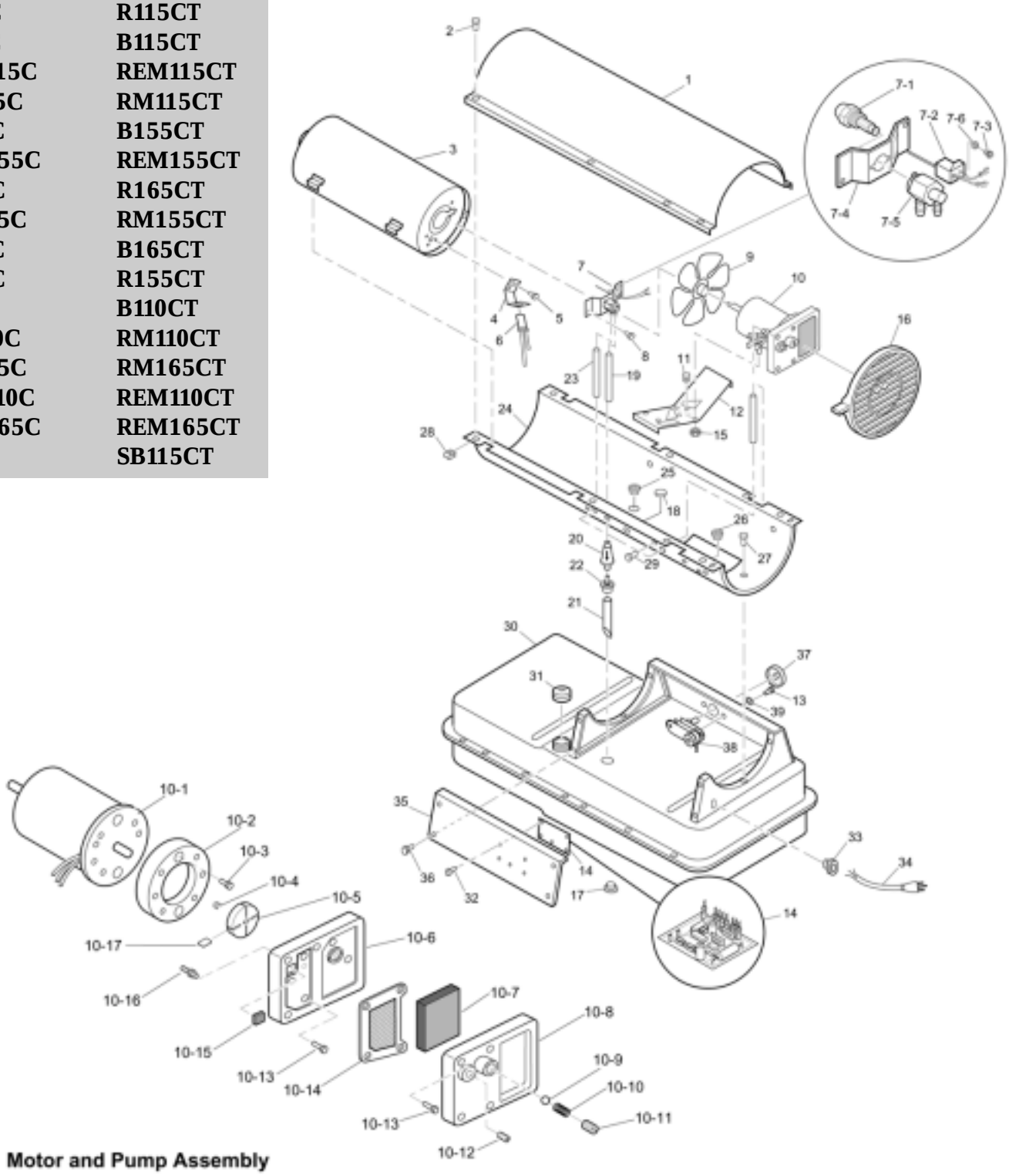
110-165,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

Model Numbers

Standard	Thermostat
R110C	R110CT
R115C	R115CT
B115C	B115CT
REM115C	REM115CT
RM115C	RM115CT
B155C	B155CT
REM155C	REM155CT
R165C	R165CT
RM155C	RM155CT
B165C	B165CT
R155C	R155CT
B110C	B110CT
RM110C	RM110CT
RM165C	RM165CT
REM110C	REM110CT
REM165C	REM165CT
	SB115CT



Motor and Pump Assembly

Desa 110-165,000 BTU HSI

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110-165,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

Key No.	Part Number	Description
1	098511-292	Upper Shell (Service Part Will Be Black)
2	M15823-27	Screw, #10-16 x 1/2" (qty. 8)
3	098512-71	Combustion Chamber (110/115)
	098512-74	Combustion Chamber (155)
	098512-75	Combustion Chamber (165)
4	103154-05	Photocell Bracket (110/115)
	M16660-02	Photocell Bracket (155/165)
5	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
6	M16656-24	Photocell Assembly
7	Δ	Burner Head Assembly
7-1	HA3027	Nozzle Assembly (110/115)
	HA3028	Nozzle Assembly (155/165)
7-2	102548-03	Ignitor Kit
7-3	M10908-75	Screw, #6-32 x 7/8"
7-4	102336-01	Nozzle Adapter Bracket
7-5	104054-01	Nozzle Adapter
7-6	103347-01	Washer
8	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
9	097293-01	Fan (110/115/155)
	102042-01	Fan (165)
10	Δ	Motor and Pump Assembly
10-1	102001-30	Motor
10-2	079975-02	Pump Body
10-3	FHPF3-5C	Screw, #10-32 x 5/8" (qty. 2)
10-4	M22009**	Rotor Insert
10-5	M22456-1**	Pump Rotor
10-6	M50545	Pump End Cover
10-7	M12179***	Intake Filter
10-8	M16545	Filter End Cover
10-9	M8940 ^	Steel Ball, 1/4" Diameter
10-10	M10993-1 ^	Relief Spring
10-11	M27694 ^	Adjusting Screw
10-12	M22997 ^	Plug
10-13	M12461-31	Screw, #10-32 x 1" (qty. 10)
10-14	M12244-1***	Output Filter
10-15	M11637***	Lint Filter
10-16	104096-01	Fitting, Straight Nylon Barb
10-17	M8643**	Blade 4
11	M50631	Rubber Bumper (qty. 2)
12	101206-01	Motor Mounting Bracket
13	M12461-18	Screw, #8-32 x 7/8"
14	104068-02	Ignition Control Assembly
15	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
16	111037-01	Fan Guard
17	M27417	Drain Plug (Includes “o” Ring)
18	107878-02	Button Plug
19	M51345-06	Fuel Line
20	106896-01	Fuel Filter
21	M51151-01	Fuel Line Tube (110/115)
	M51151-02	Fuel Line Tube (155/165)
22	M10990-3	Rubber Bushing
23	M50814-03	Airline
24	098511-293	Lower Shell (Service Part Will Be Black)
25	M50104-06	Bushing
26	M50104-01	Bushing
27	M11084-26	Screw, #10-16 x 3/8" (qty. 6)
28	M11271-8	Clip Nut (qty. 8)
29	M10908-14	Screw, #8-32 x 3/8"
30	108088-04	Fuel Tank (110/115)
	108088-11	Fuel Tank (RM115CT Only)
	108088-05	Fuel Tank (155/165)
31	097702-01	Fuel Cap (Includes Gasket)
	097663-02	Fuel Gauge (Includes Gasket, RM115CT Only)
32	102349-01	P.C. Board Support (qty. 5)
33	M11143-1	Strain Relief Bushing
34	098219-38	Power Cord
35	M51077-18	Side Cover (qty. 2)
36	M11084-26	Screw, #10-16 x 3/8" (qty. 8)
37	104460-01	Thermostat Knob
38	104458-01	Thermostat
39	WLE-2	Lock Washer, EXT #8

PARTS AVAILABLE NOT SHOWN

103814-01	Wire Tie - Groups wires connected to Ignition Control Assembly
M9900-77	Wire (Connects thermostat to Ignition Control Assembly)

Δ Not available as an assembly
** Included in Rotor Kit (Part No. HA3004)
^ Included in Pump Adjustment Kit (Part No. HA3020)
*** Included in Filter Kit (Part No. HA3017)

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110-165,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

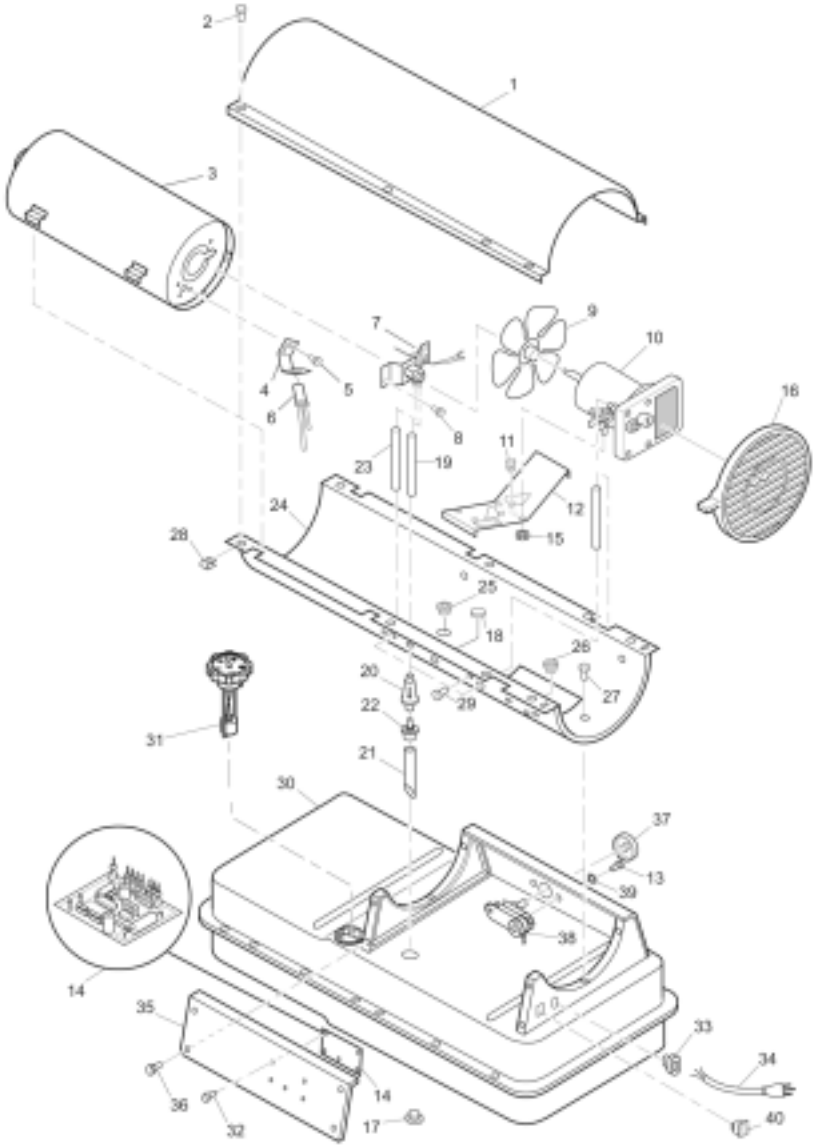
Model Numbers

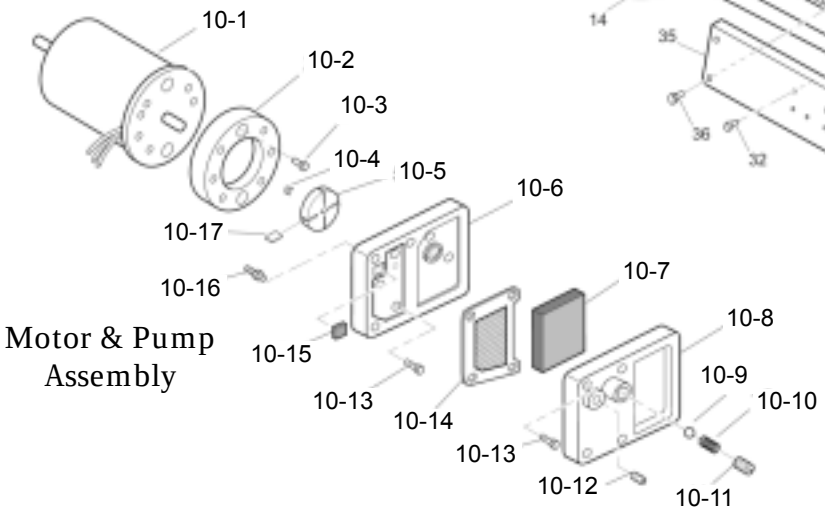
Standard

PK110	R110D	R115D
B115D	PK115	UK110
TK110	TK115	REM115D
RM115D	B155D	REM155D
R165D	RM155D	PK155
UK155	TK155	B165D
R155D	B110D	RM110D
RM165D	REM110D	REM165D
PK165	UK165	

Thermostat

R110DT	R115DT	B115DT
REM115DT	RM115DT	PK115T
UK110T	TK110T	TK115T
B155DT	REM155DT	R165DT
RM155DT	B165DT	PK155T
UK155T	TK155T	R155DT
B110DT	RM110DT	RM165DT
PK165T	UK165T	TK165T
REM110DT	REM165DT	SB115DT
SB165DT		





Motor & Pump Assembly

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110-165,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

Key No.	Part Number	Description
1	098511-292	Upper Shell (Service Part Will Be Black)
2	M15823-27	Screw, #10-16 x 1/2" (qty. 8)
3	098512-71	Combustion Chamber (110/115)
	098512-74	Combustion Chamber (155)
	098512-75	Combustion Chamber (165)
4	103154-05	Photocell Bracket (110/115)
	M16660-02	Photocell Bracket (155/165)
5	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
6	M16656-24	Photocell Assembly
7	(See page 60)	Burner Head Assembly
8	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
9	097293-01	Fan (110/115/155)
	102042-01	Fan (165)
10	Motor and Pump Assembly	
	1 102001-30	Motor
	2 079975-02	Pump Body
	3 FHPF3-5C	Screw, #10-32 x 5/8" (qty. 2)
	4 M22009	Rotor Insert
	5 M22456-1	Pump Rotor
	6 M50545	Pump End Cover
	7 M12179	Intake Filter
	8 M16545	Filter End Cover
	9 M8940	Steel Ball, 1/4" Diameter
	10 M10993-1	Relief Spring
	11 M27694	Adjusting Screw
	12 M22997	Plug
	13 M12461-31	Screw, #10-32 x 1" (qty. 10)
	14 M12244-1	Output Filter
	15 M11637	Lint Filter
	16 104096-01	Fitting, Straight Nylon Barb
	17 M8643	Blade (qty. 4)
11	M50631	Rubber Bumper (qty. 2)
12	101206-01	Motor Mounting Bracket
13	M12461-18	Screw, #8-32 x 7/8"
14	104068-02	Ignition Control Assembly
15	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
16	111037-01	Fan Guard
17	M27417	Drain Plug (Includes “o” Ring)
18	107878-02	Button Plug
19	M51345-06	Fuel Line
20	106896-01	Fuel Filter
21	M51151-01	Fuel Line Tube (110/115)
	M51151-02	Fuel Line Tube (155/165)
22	M10990-3	Rubber Bushing
23	M50814-03	Airline
24	098511-293	Lower Shell (Service Part Will Be Black)
25	M50104-06	Bushing
26	M50104-01	Bushing
27	M11084-26	Screw, #10-16 x 3/8" (qty. 6)
28	M11271-8	Clip Nut (qty. 8)
29	M10908-14	Screw, #8-32 x 3/8"
30	108088-11	Fuel Tank (Metal Filler Neck) 110/115
	108088-10	Fuel Tank (Metal Filler Neck) 155/165
	113279-02	Fuel Tank (Plastic Filler Neck) 110/115
	113279-03	Fuel Tank (Plastic Filler Neck) 155/165
31	097663-02	Fuel Cap w/ Gauge (includes Gasket) 110/115 (Use with Fuel Tank 108088-11)
	097663-03	Fuel Cap w/ Gauge (includes Gasket) 155/165 (Use with Fuel Tank 108088-10)
	113280-02	Fuel Cap w/ Gauge (includes Gasket) 110/115 (Use with Fuel Tank 113279-02)
	113280-03	Fuel Cap w/ Gauge (includes Gasket) 110/115 (Use with Fuel Tank 113279-03) 155-165
32	102349-01	P.C. Board Support (qty. 5)
33	M11143-1	Strain Relief Bushing
34	113065-01	Power Cord
35	M51077-18	Side Cover (qty. 2)
36	M11084-26	Screw, #10-16 x 3/8" (qty. 8)
37	104460-01	Thermostat Knob
38	104458-01	Thermostat
39	WLE-2	Lock Washer, EXT #8
40	113461-01	ON/OFF Switch with Light

PARTS AVAILABLE NOT SHOWN

113137-01	Fuel Gasket
103814-01	Wire Tie - Groups wires connected to Ignition Control Assembly
M9900-77	Wire (Connects thermostat to Ignition Control Assembly)
079010-46	Wire (Connects ON/OFF Switchto Ignition Control Assembly or Thermostat if Equipped)

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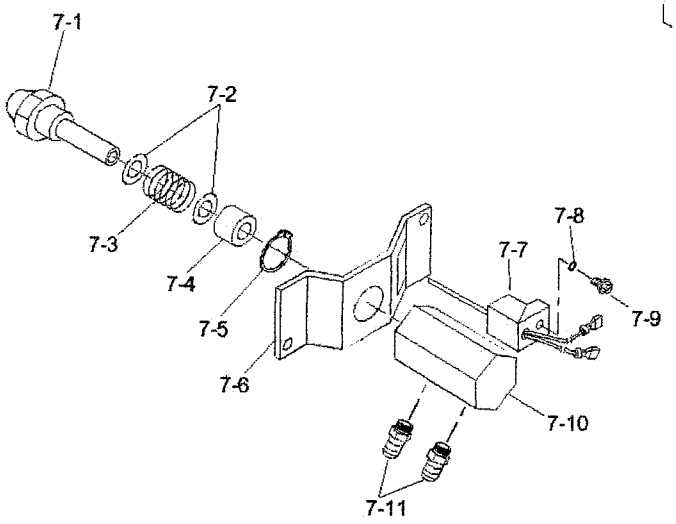
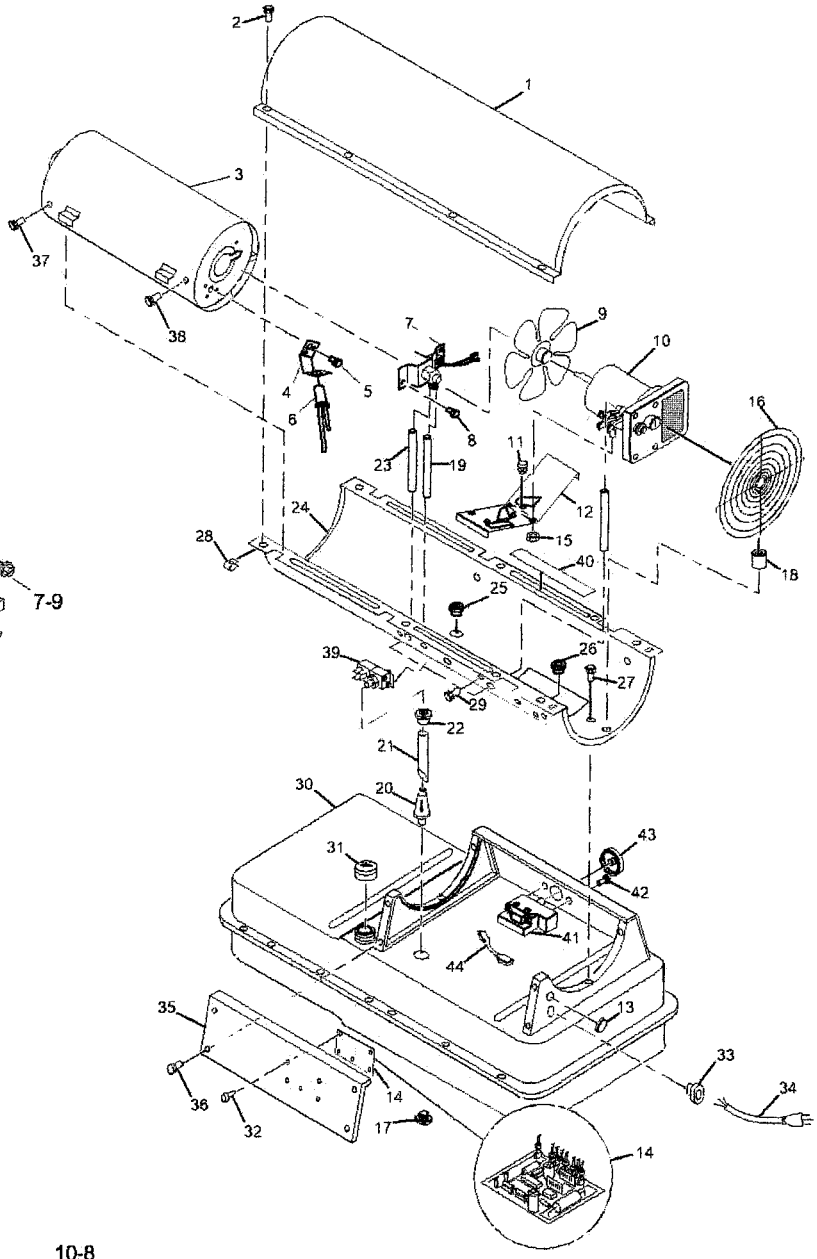
200,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

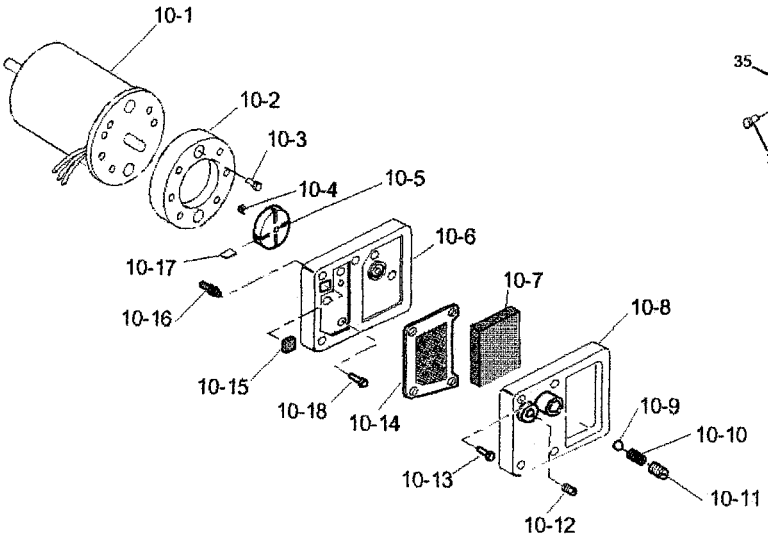
Model Numbers

Reddy	Remington	Master
RM200AT	REM200AT	B200AT
R200A		

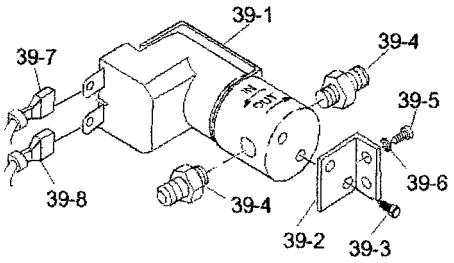


Nozzle Assembly





Motor & Pump Assembly



Fuel Valve Assembly

Desa 200,000 BTU HSI

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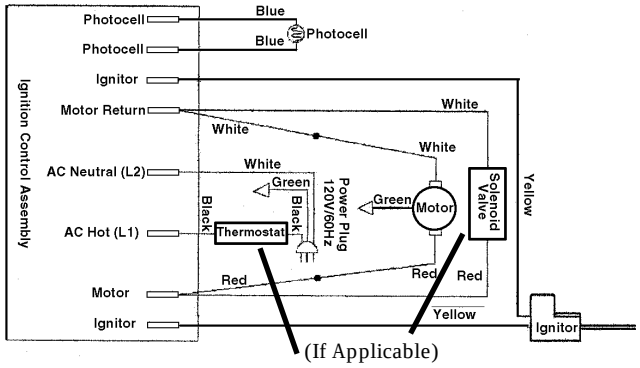
200,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

Key No.	Part Number	Description
1	107353-10	Upper Shell
2	100647-01	Screw, #10-16 x 3/8” (qty. 8)
3	098512-69	Combustion Chamber
4	103154-05	Photocell Bracket
5	M10908-2	Screw, #6-32 x 3/8” (qty. 2)
6	M16656-24	Photocell Assembly
7	**BURNER HEAD ASSEMBLY**	
7-1	100735-13	Nozzle
7-2	M10659-1	Nozzle Washer (qty. 2)
7-3	M10809-1	Nozzle Spring
7-4	M8882	Nozzle Sleeve
7-5	107272-01	Retaining Ring
7-6	102336-04	Nozzle Adapter Bracket
7-7	HA1000	Ignitor Kit
7-8	103347-01	Belleville Washer
7-9	M10908-75	Screw, #6-32 x .88
7-10	107273-01	Nozzle Adapter
7-11	M50820-02	Barb Fitting (qty. 2)
8	M11084-27	Screw, #10-16 x 1/2” (qty. 2)
9	102042-01	Fan
10	**MOTOR & PUMP ASSEMBLY**	
10-1	102001-27	Motor
10-2	079975-03	Pump Body Ring (5/8” metal)
10-3	FHPF3-6C	Screw, #10-32 x 5/8” (qty. 2)
10-4	M22009	Rotor Insert
10-5	M22456-2	Pump Rotor (5/8”)
10-6	M50545	Pump End Cover (metal)
10-7	M12179	Intake Filter (sponge)
10-8	M16545	Filter End Cover (plastic)
10-9	M8940	Steel Ball, 1/4” diameter
10-10	M10993-1	Pressure Relief Spring
10-11	M27694	Pressure Adjusting Screw
10-12	M22997	Plug
10-13	M12461-31	Screw, #10-32 x 1” (qty. 4)
10-14	M12244-1	Output Filter
10-15	M11637	Lint Filter (sponge)
10-16	M50820-02	Barb Fitting
10-17	M8643-2	Vanes (5/8”) set of 4
10-18	M12461-32	Screw, #10-32 x 1.12” (qty. 6)
11	M50631	Rubber Bumper (qty. 2)
12	101206-01	Motor Mounting Bracket
13	101695-01	Button Plug
14	104068-02	Ignition Control Assembly
15	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
16	102756-01	Fan Guard
17	M27417	Drain Plug (includes “O” Ring)
18	103523-01	Rubber Bushing
19	M51345-03	Fuel Line

Key No.	Part Number	Description
20	M51150-200	Fuel Filter
21	M51345-04	Fuel Line Tube
22	M10990-3	Rubber Bushing
23	M50814-03	Air Line
24	107353-11	Lower Shell
25	M30865-02	Bushing
26	M50104-01	Bushing
27	M11084-27	Screw, #10-16 x 1/2” (qty. 6)
28	M11271-8	Clip Nut (qty. 8)
29	M10908-14	Screw, #8-32 x 3/8”
30	**FUEL TANK**	
	108088-06	Fuel Tank (R200A)
	098513-105	Fuel Tank (RM200AT, B200AT)
31	097702-01	Fuel Cap (includes gasket)
32	102349-01	PC Board Support (qty. 5)
33	M11143-1	Strain Relief Bushing
34	098219-38	Power Cord
35	107333-04AA	Sidecover
36	M11084-27	Screw, #10-16 x 1/2” (qty. 4)
37	099230-01	Special Screw, (qty. 2)
38	M11084-27	Screw, #10-16 x 1/2” (qty. 2)
39	**FUEL VALVE ASSEMBLY - if applicable**	
39-1	105939-01	Fuel Valve (always order with #39-2)
39-2	107336-01	Fuel Valve Bracket
39-3	M12461-13	Hex Head Screw, #8-32 x 1/4” (qty. 2)
39-4	M50820-02	Fitting Barb (qty. 2)
39-5	M11084-38	Hex Tpg Screw, #8-18 x 3/8” (qty. 2)
39-6	WLE-2	Lock Washer (qty. 2)
39-7	107274-01	Wire Assembly (Red)
39-8	107274-02	Wire Assembly (White)
40	097785-04	Foam Gasket (qty. 2)
41	097657-03	Thermostat (If Applicable)
42	M10908-1	Screw, #6-32 x 1/4” (qty. 2)
43	104905-01	Thermostat Knob (If Applicable)
44	079010-35	Wire Assembly
PARTS AVAILABLE-NOT SHOWN		
	HA1180	Air Gauge Kit
	HA2210	Fuel Tank Filter Screen
	HA3005	Rotor Kit
	HA3017	Filter Kit
	HA3020	Pump Kit
	HA2204	Handles (qty. 2)
	M12345-33	Screw, #10-24 x 1 3/4” (qty. 8)
	M12831-3	Wheel Support Frame
	NTC-3C	Hex Nut, #10-24 (qty. 8)
	097896-04	Wheel (qty. 2)
	M28526	Cap Nut (qty. 2)
	M16801-2	Axle

Output Rating	200,000 BTU/Hr
Fuel	K1 or No. 1 Fuel Oil
Fuel Tank Capacity	13.5 (US Gal.)
Fuel Consumption	1.4 GPH
Pump Pressure	6.2 PSI
Electric Requirements	120V/60Hz
Amperage	3.6
Hot Air Output (CFM)	600
Motor RPM	3400
Motor HP	1/4



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200,000 BTU Forced Air H.S.I. Desa Oil Fired Heater

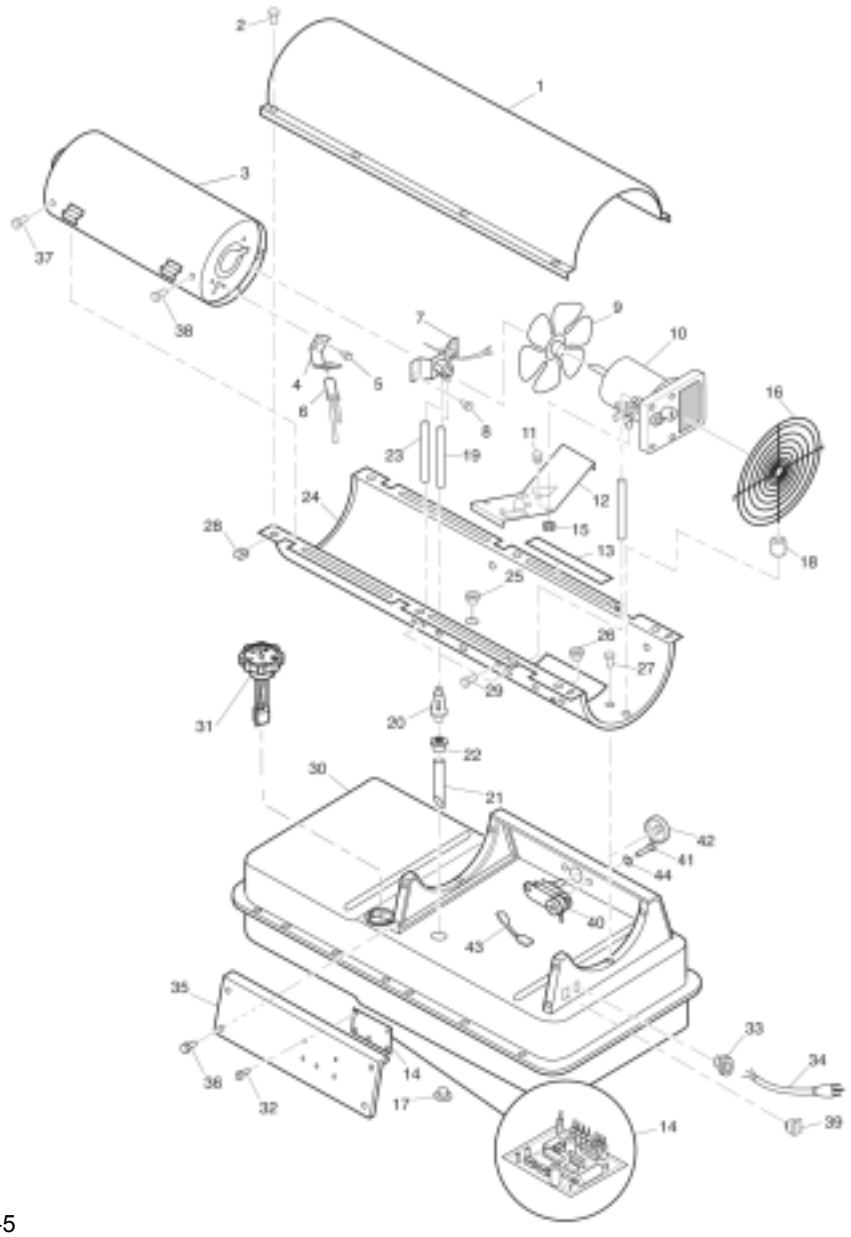
Model Numbers

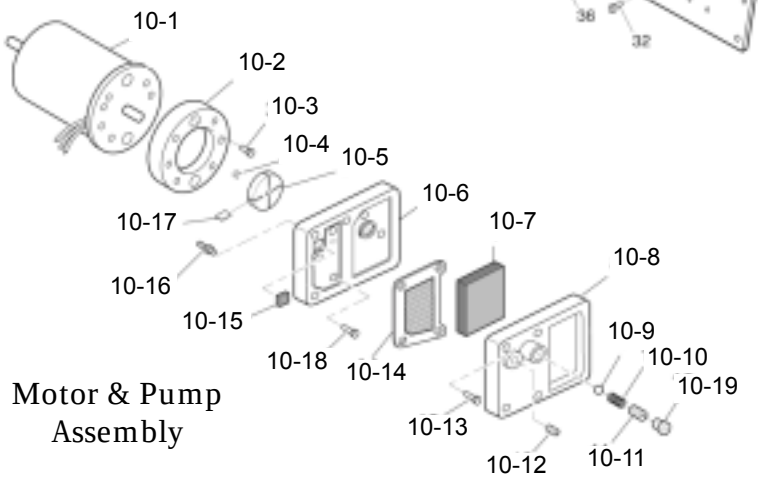
Standard

R200B	PK200
UK200	TK200

Thermostat

RM200BT	B200BT
PK200T	UK200T
TK200T	REM200BT
R200BT	





Motor & Pump Assembly

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Key No.	Part Number	Description	
1	107353-10	Upper Shell (Service Part Will Be Black)	
2	M15823-27	Screw, #10-16 x 1/2" (qty. 8)	
3	098512-78	Combustion Chamber	
4	M16660	Photocell Bracket	
5	M10908-2	Screw, #6-32 x 3/8" (qty. 2)	
6	M16656-24	Photocell Assembly	
7	(See page 26)	Burner Head Assembly	
8	M11084-26	Screw, #10-16 x 3/8" (qty. 2)	
9	102042-01	Fan	
10		Motor and Pump Assembly	
	1	102001-27	Motor
	2	079975-03	Pump Body
	3	FHPF3-6C	Screw, #10-32 x 5/8" (qty. 2)
	4	M22009	Rotor Insert
	5	M22456-2	Pump Rotor
	6	M50545	Pump End Cove
	7	M12179	Intake Filter
	8	M16545	Filter End Cover
	9	M8940	Steel Ball, 1/4" Diameter
	10	M10993-1	Relief Spring
	11	M27694	Adjusting Screw
	12	M22997	Plug
	13	M12461-31	Screw, #10-32 x 1" (qty. 4)
	14	M12244-1	Output Filter
	15	M11637	Lint Filter
	16	M50820-02	Barb Fitting
	17	M8643-2	Blade (qty. 4)
	18	M12461-32	Screw, #10-32 x 1.12" (qty. 6)
	19	105780-01	Plastic Cap
11	M50631	Rubber Bumper (qty. 2)	
12	101206-01	Motor Mounting Bracket	
13	097785-04	Foam Gasket (qty. 2)	
14	104068-02	Ignition Control Assembly	
15	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)	
16	102756-01	Fan Guard	
17	M27417	Drain Plug (Includes “o” Ring)	
18	103523-01	Rubber Bushing	
19	M51345-03	Fuel Line (Models with Fuel Valve Assembly)	
	M51345-04	Fuel Line (Models without Fuel Valve Assembly)	
20	M51150-01	Fuel Filter	
21	M51345-04	Fuel Line Tube (Models with Fuel Valve Assembly)	
	M51151-02	Fuel Line Tube (Models without Fuel Valve Assembly)	
22	M10990-3	Rubber Bushing	
23	M50814-03	Airline	
24	107353-11	Lower Shell (Service Part Will Be Black)	
25	M50104-06	Bushing (qty. 2)	
26	M50104-01	Bushing	
27	M11084-26	Screw, #10-16 x 3/8" (qty. 6)	
28	M11271-8	Clip Nut (qty. 8)	
29	M10908-14	Screw, #8-32 x 3/8"	
30	108088-17	Fuel Tank (Metal Filler Neck)	
	113279-04	Fuel Tank (Plastic Filler Neck)	

Key No.	Part Number	Description
31	097663-03	Fuel Cap w/ Gauge (includes Gasket) (Use with Fuel Tank 108088-17)
	113280-03	Fuel Cap w/ Gauge (includes Gasket) (Use with Fuel Tank 113279-04)
32	102349-01	P.C. Board Support (qty. 5)
33	M11143-1	Strain Relief Bushing
34	113065-01	Power Cord
35	107333-04AA	Side Cover
36	M11084-26	Screw, #10-16 x 3/8" (qty. 8)
37	099230-01	Screw, Special (qty. 2)
38	M11084-27	Screw, #10-16 x 1/2" (qty. 2)
39	113461-01	ON/OFF Switch with Cover
40	104458-01	Thermostat
41	M12461-18	Screw, #8-32 x 7/8"
42	104460-01	Thermostat Knob
43	079010-35	Wire Assembly
44	WLE-2	Lock Washer, EXT #8

PARTS AVAILABLE-NOT SHOWN

103814-01	Wire Tie (Not Shown - For Ignition Control Assembly)
100621-06	Thermostat Decal (Not Shown)
079010-46	Wire (Not Shown - For ON/OFF Switch)
113137-01	Fuel Gasket

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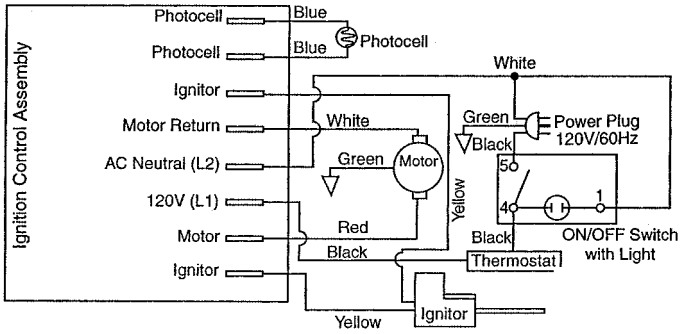
Desa Pro Plus Series Heaters

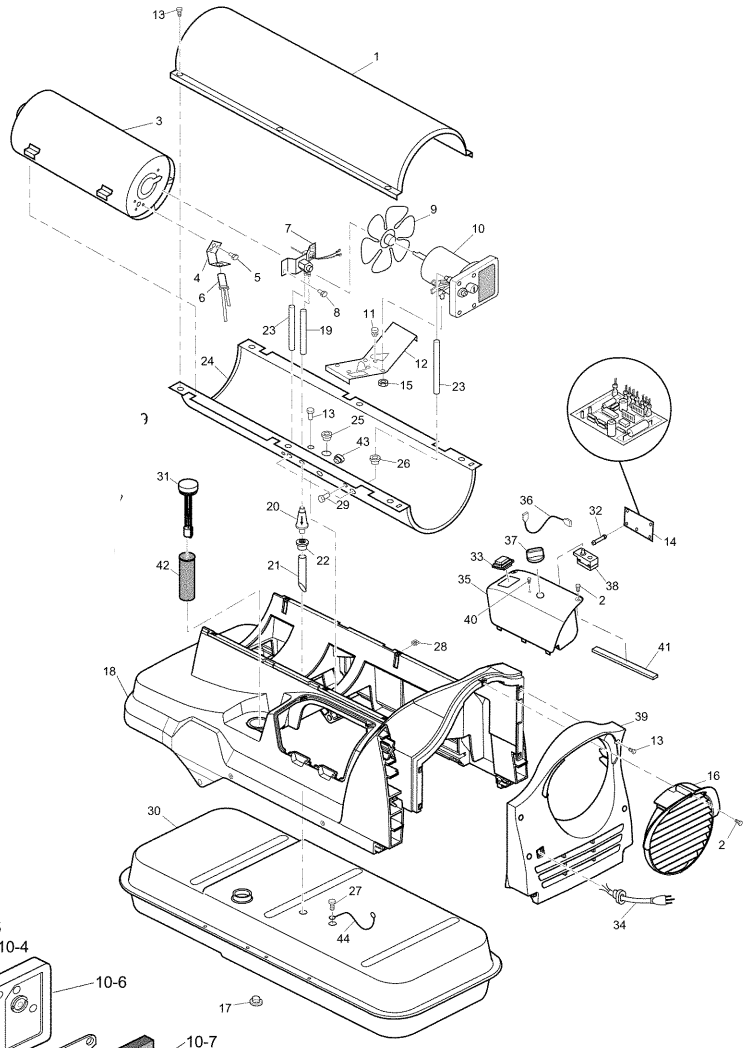
Model Numbers

125T Models	170T Models	200T Models
RH125T	RH170T	RHD200T
RHD125T	RHD170T	M200T
RL125T	RL170T	
M125T	M170T	

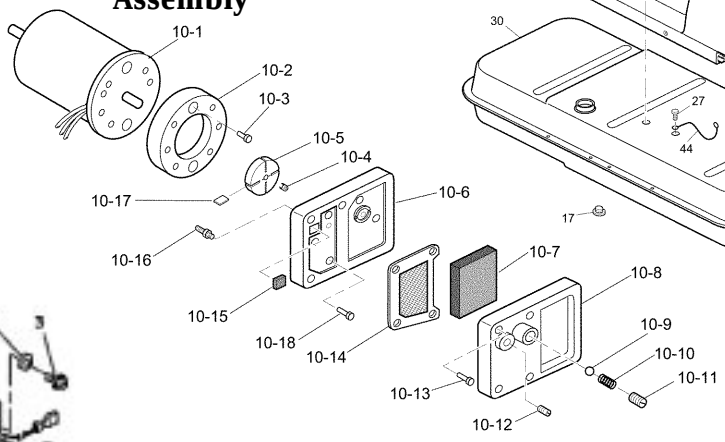
WIRING DIAGRAM

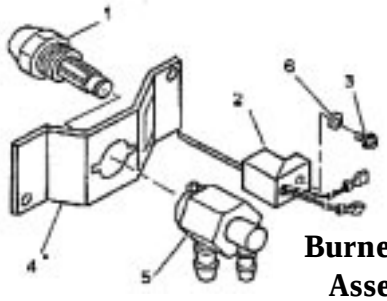


Nozzle Assembly

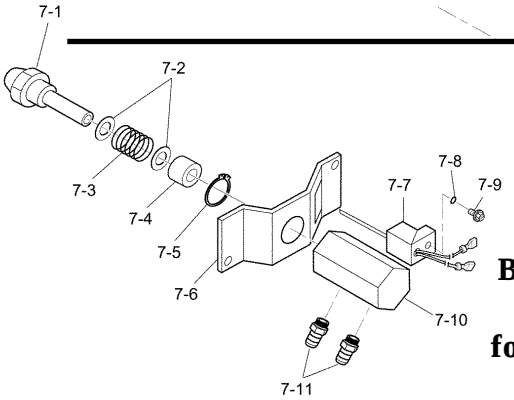


Motor & Pump Assembly

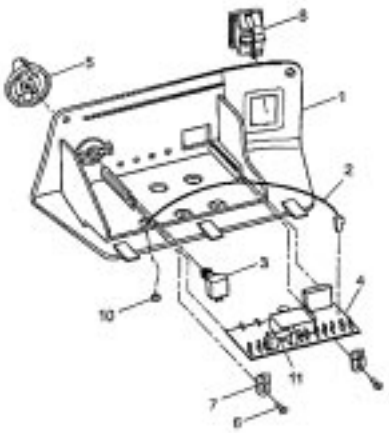




Burner Head Assembly for 125 &170



Burner Head Assembly for 200 Series



Control Cover Assembly

Key No.	Part Number	Description
1	108461-02	Control cover
2	113606-01	Temp. sensor
3	113607-01	Therm. control
4	116111-01	Ignition Control
5	108480-01	Knob
6	113379-01	Screw, #8
7	113378-01	Plastic Clip
8	108394-01	Switch Cover
9	M9900-170	Wire Assembly
10	113339-01	Rubber Grommet
11	113752-01	Fuse

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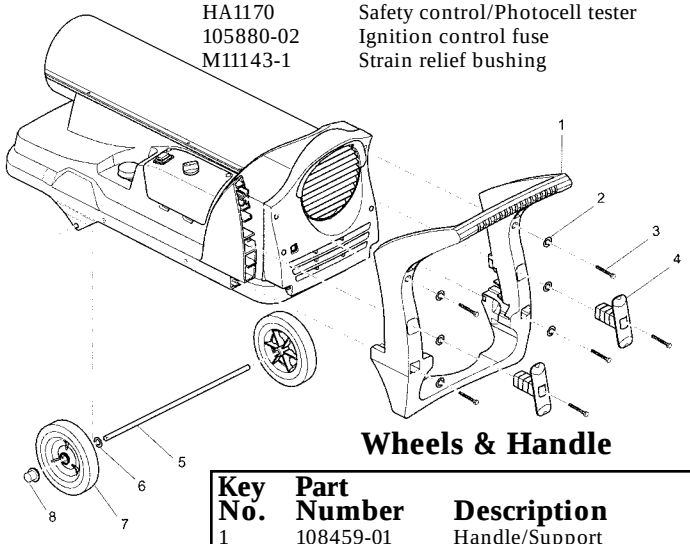
Desa Pro Plus Series Heaters

Key No.	Part Number	Description
1	107353-01	Upper Shell (Black)
2	108631-01	Screw, #10-16 x 1" (qty. 3)
3	COMBUSTION CHAMBER	
	098512-71	All 125T's
	098512-73	All 170T's
	098512-69	All 200T's
4	PHOTOCELL BRACKET	
	103154-05	All 125T's and 170T's
	107791-01	All 200T's
5	M10908-2	Screw, #6-32 x 3/8" (qty. 2)
6	M16656-21	Photocell Assembly
7	**BURNER HEAD ASSEMBLY**	
200T MODELS		
7-1	100735-13	Nozzle
7-2	M10659-1	Nozzle Washer (qty. 2)
7-3	M10809-1	Nozzle Spring
7-4	M8882	Nozzle Sleeve
7-5	107272-01	Retaining Ring
7-6	102336-04	Nozzle Adapter Bracket
7-7	HA1000	Ignitor Kit
7-8	103347-01	Belleville Washer
7-9	M10908-75	Screw, #6-32 x .88
7-10	107273-01	Nozzle Adapter
7-11	M50820-02	Barb Fitting (qty. 2)
125T & 170T MODELS		
7-1	HA3027	Nozzle (125T)
	HA3029	Nozzle Assembly (170T)
7-2	102548-07	Ignitor Kit
7-3	M10908-75	Screw
7-4	102336-01	Nozzle Adapter Bracket
7-5	104054-01	Nozzle Adapter
7-6	103347-01	Washer
8	M11084-26	Screw, #10-16 x 3/8" (qty. 2)
9	FAN	
	097293-01	All 125T's
	102042-01	All Others
10	**MOTOR & PUMP ASSEMBLY**	
10-1	**MOTOR**	
	102001-30	All 125T's
	102001-27	All 200T's and 170T's
10-2	**PUMP BODY RING**	
	079975-02	All 125T's
	079975-03	All 200T's and 170T's
10-3	FHPF3-5C	Screw, #10-32 x 5/8" (qty. 2)
	FHPF3-6C	Screw, #10-32 x 3/4" (qty. 2)
10-4	M22009	Rotor Insert
10-5	**PUMP ROTOR**	
	M22456-1	All 125T's
	M22456-2	All 200T's and 170T's
10-6	M50545	Pump End Cover (metal)
10-7	M12179	Intake Filter (sponge)
10-8	M16545	Filter End Cover (plastic)
10-9	M8940	Steel Ball, 1/4" diameter
10-10	M10993-1	Pressure Relief Spring
10-11	M27694	Pressure Adjusting Screw
10-12	M22997	Plug
10-13	M12461-31	Screw, #10-32 x 1" (qty. 4)
10-14	M12244-1	Output Filter
10-15	M11637	Lint Filter (sponge)
10-16	**FITTING BARB**	
	104096-01	All 125T's
	M50820-02	All 200T's and 170T's
10-17	**BLADE**	
	M8643	All 125T's (qty. 4)
	M8643-2	All 200T's and 170T's (qty. 4)
10-18	M12461-32	Screw, #10-32 x 1 1/8" (qty. 6)
11	M50631	Rubber Bumper (qty. 2)
12	101206-01	Motor Mounting Bracket
13	M11084-29	Screw, #10-16 x 3/4"
14	104068-02	Ignition Control Assembly
15	NTC-4C	Hex Lock Nut, 1/4-20 (qty. 2)
16	108460-01	Fan Guard
17	M27417	Drain Plug (includes "O" Ring)
18	108457-01	Shroud
19	**FUEL LINE**	
	M51345-12	All 125T's
	M51345-09	All 170T's
	M51345-04	All 200T's
20	M51150-01	Fuel Filter
21	M51151-02	Fuel Line Tube
22	M10990-3	Rubber Bushing
23	**AIR LINE**	
	M50814-08	All 125T's
	M50814-03	All 170T's and 200T's
24	107353-11	Lower Shell (Black)
25	M50104-06	Bushing (qty. 2)
26	M50104-01	Bushing
27	M12461-51	Screw, #10-16 x 1/2" (qty. 1)
28	108708-01	Clip Nut (qty. 13)
29	M10908-14	Screw, #8-32 x 1/4"
30	108088-12	Fuel Tank
31	097663-03	Fuel Cap / Gauge
32	108668-01	PC Board Support (qty. 5)
33	108394-01	On/Off Switch
34	107994-01	Power Cord
35	108461-01	Control Cover
36	M9900-170	Wire Assembly, Black (qty. 2)
37	104460-01	Knob
38	104458-01	Thermostat
39	108458-01	Rear Panel
40	M12461-18	Screw, #8-32 x 7/8"
41	097785-08	Foam Gasket
42	108739-01	Filler Neck Screen
43	097467-02	Button Plug
44	M9900-197	Wire Assembly, Green

PARTS AVAILABLE-NOT SHOWN

HA1180	Air Gauge Kit
HA1170	Safety control/Photocell tester
105880-02	Ignition control fuse
M11143-1	Strain relief bushing



Wheels & Handle

Key No.	Part Number	Description
1	108459-01	Handle/Support
2	WP4C	Washer (qty. 6)
3	108630-01	Screw (qty. 6)
4	108463-01	Extension Cord Wrap (qty. 2)
5	M16801-5	Axle
6	108468-01	Washer (qty. 2)
7	107426-01	Wheel Kit (Contains: 2 wheels & cap nuts)
8	M28526	Cap Nut (qty. 2)

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Figure #1 (Old Style Burner Assembly)

Key No.	Part Number	Description
1	HA3009	Nozzle: B110A, R110A, REM110A
	HA3011	Nozzle: B150H, R150E, REM150A/D, R155A
2	M10659-1	Nozzle Washer (qty. 2)
3	M10809-1	Nozzle Spring
4	M8882	Nozzle Sleeve
5	M50924-04	Burner Head: B110A, R110A, REM110A
	M50924-06	Burner Head: B150H, R150E, REM150A/D, R155A
6	M50820-02	Barb Fitting (qty. 2)
7	102548-02	Glowbar Ignitor
8	M10908-2	Screw, #10-16 x 1/2"

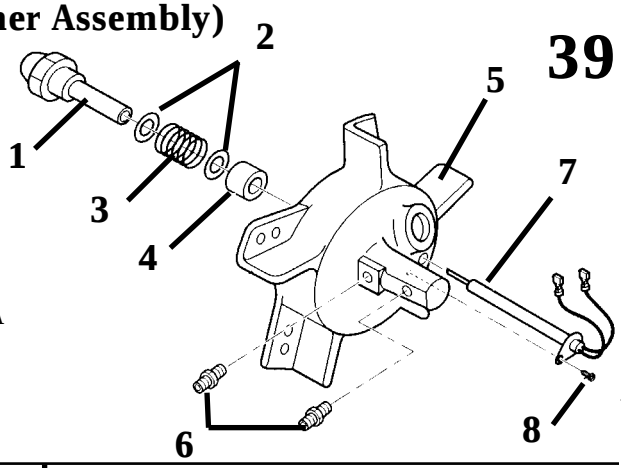
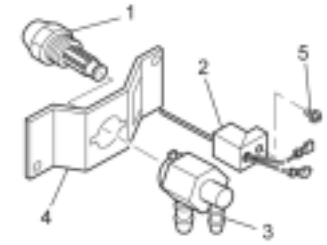
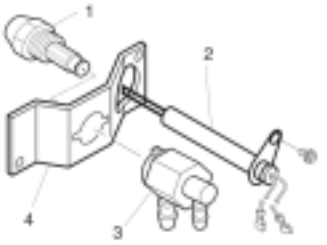


Figure #2 (Newer Style Burner Assembly) 40



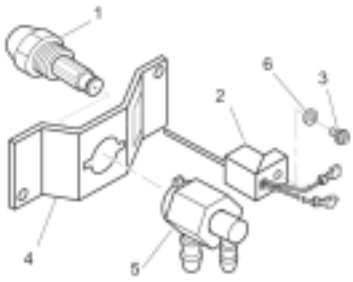
40/50/55/60/70 MODELS WITH HA1000 IGNITOR

Key#	Part	Description
1	HA3006	Nozzle Assembly (40)
	HA3024	Nozzle Assembly (50/55/60)
	HA3026	Nozzle Assembly (70)
2	HA1000	Ignitor Kit
3	104056-01	Nozzle Adapter
4	102336-01	Nozzle Adapter Bracket
5	M10908-75	Screw, Hex Head, Tapping
6	103347-01	Belleville Washer



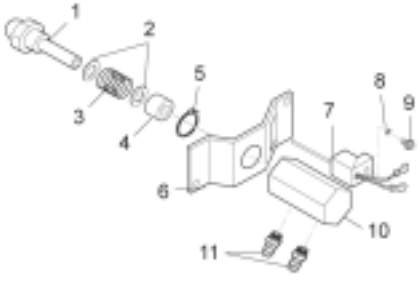
50/55/60 MODELS WITH 102548-08 IGNITOR

Key#	Part	Description
1	HA3024	Nozzle Assembly
2	HA1100	Ignitor Kit
3	102336-05	Nozzle Adapter Bracket
4	104056-01	Nozzle Adapter



110/115/155/165 MODELS

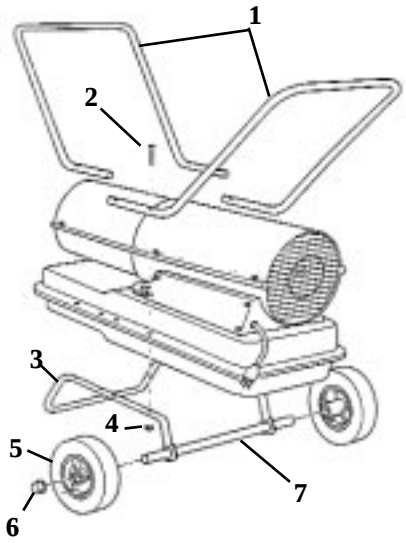
Key#	Part	Description
1	HA3027	Nozzle Assembly (110/115)
	HA3028	Nozzle Assembly (155/165)
2	HA1000	Ignitor Kit
3	M10908-75	Screw, #6-32 x 7/8"
4	102336-01	Nozzle Adapter Bracket
5	104054-01	Nozzle Adapter
6	103347-01	Washer



200 MODELS

Key#	Part	Description
1	100735-13	Nozzle Assembly
2	M10659-1	Nozzle Washer (qty. 2)
3	M10809-1	Nozzle Spring
4	M8882	Nozzle Sleeve
5	107272-01	Retaining Ring
6	102336-03	Nozzle Adapter Bracket
7	HA1000	Ignitor Kit
8	103347-01	Belleville Washer
9	M10908-75	Screw, #6-32 x .88
10	107273-01	Nozzle Adapter
11	M50820-02	Barb Fitting

Handle & Wheel Kit Assembly



Key No.	Part Number	Description
1	HA2203	Handle (110-115,000) (qty. 2)
	HA2204	Handle (150-165,000) (qty. 2)
2	M12345-33	Screw, #10-24 x 1 3/4" (qty. 8)
3	M12342-3	Wheel support frame (110-115,000)
	M12831-3	Wheel support frame (150-165,000)
4	NTC-3C	Hex Nut, #10-24 (qty. 8)
5	097896-01	Wheel (white) with push nut (qty. 2)
	107426-01	Wheel (black) with push nut (qty. 2)
6	M28526	Cap nut (qty. 2)
7	M51015-01	Axle (110-115,000)
	M16801-2	Axle (150-165,000)

PARTS AVAILABLE NOT SHOWN

105880-02	Fuse for 104068-02 ignition control
HA1180	Low pressure gauge
HA1210	Remote thermostat (most accurate)
PT100HTST	Remote thermostat (high-low)
103814-01	Wire tie-groups wires connected to ignition control assembly
HA3004	1/2" rotor kit
HA3017	Filter kit
HA3020	Pump kit
HA1170	Safety control/photocell tester

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KNIPCO LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
F30	102762-01	102482-01	HA3003	M29678	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-41
F50	M31316	154009**	HA3003	M12431	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	079725-01	M10716-1A
F50A	107262-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M30875	HA3019	HA3004	M50876-01	098513-42
F50D	M31316	154009**	HA3003	M12431	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	079725-01	M10716-1A
F50E	102001-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	098513-20
F50F	102001-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	098513-22
F50G	102001-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	098513-20
F50S	102001-14	102482-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26316	HA3019	HA3004	M19630	M27553-02C
FV60S	102001-14	102482-01	HA3003	M28730	107850-01	HA3012	M12179	M12244-1	M26316	HA3019	HA3004	M19630	M27553-04A
F65 / F65D	M31316	154009**	HA3003	M20517	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	M19630	M17016-1S
F66D	102001-14	102482-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26316	HA3019	HA3004	M19630	M27533-010A
F70 / F75	M5721	M5301-1	NA	M4502	M5727	M4752-2	NA	NA	M6638	NA	M5703	M5855	M5723 / M6620
F80/F85/F85C	M21023-1	M27827-3	NA	M14529	M12462-5	M8989 (Left) M8990 (Right)	M8849	M9942G1	M18048	NA	HA3004	M8976-2	M8634
F85E	M9922	M27827-3	NA	M9726	M9725	M8989 (Left) M8990 (Right)	M8849	M9942G1	M18048	NA	HA3004	M8976	M8634
F88	M21023-1	M27827-3	NA	M14529	M12462-5	M8989 (Left) M8990 (Right)	M8849	M9942G1	M18048	NA	HA3004	M10808-1	M10780-1
F98	M31316	102482-01	HA3003	M14529	M12462-5	HA3012	M12179	M12244-1	M18048	HA3019	HA3004	M13846-1	M12321-1
F98	M31316	M27827-3	NA	M14529	M12462-5	M8989 (Left) M8990 (Right)	M12179	M12244-1	M18048	NA	HA3004	M19630	M12321-1
F98C	M31316	M27827-3	M12013	M12464	M12462-5	M8989 (Left) M8990 (Right)	M12179	M12244-1	M18048	M9211-4	HA3004	M13846-1	M12321-1
F98D	M31316	102482-01	HA3003	M14529	M12462-5	HA3012	M12179	M12244-1	M18048	HA3019	HA3004	M19630	098513-04
F110	M31316	102482-01	HA3003	M23147	M12462-9	HA3012	M12179	M12244-1	100735-05	HA3019	M22465-3 Rotor M8643-3 Blades	M19630	098513-04
F110D	M31316	102482-01	HA3003	M23147	M12462-9	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
F110E	097308-06	102482-01	097528-01	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	098513-31
F110F / F110G	097308-06	102482-01	HA3003	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04

**154009 is closest fit

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KNIPCO LOW PRESSURE (CONT.)

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
F110H	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
F120	097308-04	M27827-3	NA	M13038	M12462-5	M12951 (Left) M12952 (Right)	M12179	M12244-1	M14293	NA	HA3004	M14259-1	M12820-4
F120D	097308-04	M27827-3	HA3003	M13038	M12462-5	M12951 (Left) M12952 (Right)	M12179	M12244-1	M14293	HA3019	HA3004	M14259-1	M12820-4
FV125C	097308-04	102482-01	M50230	M27982	Call	HA3012	M12179	M12244-1	100735-05	097059-01	M22456-3 Rotor M8643-3 Blades	079722-01	098513-11
FV125S	097308-04	102482-01	M50230	M27982	Call	HA3012	M12179	M12244-1	100735-05	HA3019	M22456-3 Rotor M8643-3 Blades	079722-01	098513-11
F140	097308-04	M27827-3	NA	M13038	Call	M12951 (Left) M12952 (Right)	M12179	M12244-1	HA3011	NA	M22456-3 Rotor M8643-3 Blades	M16667-1	M12820-4
F140D	097308-04	M27827-3	HA3003	M13038	Call	M12951 (Left) M12952 (Right)	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M16667-1	M12820-4
F150 / F150D	097308-04	102482-01	HA3003	M17058	Call	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
50E	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
F105F	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M19630	098513-11
F150S	097308-04	102482-01	HA3003	M17058	Call	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
F150G	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M19630	098513-11
F150H	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M51150-01	108088-05

REDDY LOW PRESSURE OIL

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
M30	102762-01	102482-01	HA3003	M29678	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-41
R30	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-04	108088-01
R35/R35A/R35B	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3006	HA3019	HA3004	M50876-04	108088-01
R35D	102001-28	104068-02	NA	M30884	NA	HA1000	M29633	M29612-01	HA3006	M16656-24	HA3004	M50876-04	108088-01
R35E	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3006	M16656-24	HA3004	M50876-04	108088-01
R40 / R40T	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3006	M16656-24	HA3004	M50876-04	108088-01
Mini Furnace	M31316	154009**	NA	M20941	M12462-5	HA3012	M11146-1	M15241	M11054-1	NA	HA3004	M19630	108088-01
Mark 50D	M31316	154009**	HA3003	M12431	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	M11146-1	M17016-(H)
M50	M31316	154009**	HA3003	M12431	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	M19630	M17016-1B
M50A	102762-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M30875	HA3019	HA3004	M50876-01	098513-42
M50D	M31316	154009**	HA3003	M12431	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	M19630	M17016-1B
M50S	102001-14	102482-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26316	HA3019	HA3004	M19630	M27553-02AA
R50 / R50A / R50B	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	098513-20
R55	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3021	HA3019	HA3005	M50876-05	108088-03
R55A	102001-28	104068-02	NA	M30884	NA	HA1000	M29633	M29612-01	HA3027	M16656-24	HA3005	M50876-05	108088-03
R55B / R55BT	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3024	M16656-24	HA3005	M50876-05	108088-03
R55M	102001-02	100777-02	NA	M30884	NA	HA3013	M29633	M29612-01	HA3021	M16656-20	HA3005	M50876-05	108088-03
R60/R60T/ RM60/RM60T	102001-28	104068-02	NA	103684-01	NA	102548-03	M29633	M29612-01	HA3024	M16656-24	HA3005	M50876-05	108088-03
R60A	102001-28	104068-02	NA	103684-01	NA	"L" Shaped - HA1000 "Pencil" Shaped - HA1100	M29633	M29612-01	HA3024	M16656-24	HA3005	M50876-05	108088-16 Metal 113279-01 Plastic
MC60	102001-14	102482-01	M50230	M25727	107850-01	HA3012	M12179	M12244-1	M26316	097059-01	HA3004	079725-02	M27553-03AA
M65 / M65D	M31316	154009**	HA3003	M25727	M12462-5	HA3012	M11146-1	M15241	M26316	HA3019	HA3004	M19630	M10716-1B
M66D/Round End Cover	102001-14	102482-01	HA3003	M25727	097061-01	HA3012	M29633	M29612-01	M26313	HA3019	HA3004	M19630	M27553-01AA
M66D/Rectangal End Cover	102001-14	102482-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26313	HA3019	HA3004	M19630	M27553-01AA
R70	097308-02	102482-01	HA3003	M51107-01	107850-01	HA3012	M29633	M29612-01	HA3008	HA3019	HA3004	M50876-05	108088-03
R70A / R70AT	097308-02	102482-01	HA3003	M51107-01	097061-01	HA3012	M29633	M2612-01	HA3008	HA3019	HA3004	M50876-02	108088-03
R70B/R70BT/ R70CT	097308-02	102482-01	HA3003	M51107-01	097061-01	HA3012	M29633	M2612-01	HA3008	HA3019	HA3004	M50876-05	108088-03
R70D	102001-20	104068-02	NA	M29678	NA	HA1000	M29633	M29612-01	HA3026	M16656-24	HA3004	M50876-05	108088-03
R70DT	102001-20	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3026	M16656-24	HA3004	M50876-05	108088-03
Mark 75D	M31316	M27827-3	HA3003	M13580	M12462-5	M8989 (Left) M899 (Right)	M12179	M12244-1	M18048	HA3019	HA3004	M13846-1	M12321-1
R75	M23622-1	M3501-3	M6657	M4502	M5727	M8035	NA	NA	M4966	NA	M8243 / NA	M8616	M8490
MS80	M31316	M27827-3	NA	M12464	097061-01	M8989 (Left) M899 (Right)	M12179	M12244-1	M18048	NA	M22456-3 Rotor M8643-3 Blades	M13846-1	M11636-1
M85 / M85D	M31316	102482-01	HA3003	M14529	M12462-5	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
M100	M31316	102482-01	HA3003	M23147	M12462-5	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04

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REDDY LOW PRESSURE OIL (CONT)

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
M100D	M31316	102482-01	HA3003	M23147	M12462-6	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
R100	097308-06	102482-01	097528-01	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
R100A / R100B	097308-06	102482-01	HA3003	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
RH100VT	102001-30	104068-06	NA	097293-01	NA	HA1000	M12179	M12244-1	100735-32	M16656-21	HA3004	106896-01	108088-12
R110	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
R110A	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3009	M16656-24	HA3004	M51150-01	108088-04
R110B(T)/R110C(T) RM110C(T)	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
R110M3	097308-06	101551-02	NA	097293-01	NA	HA3012	M12179	M12244-1	HA3009	M16656-21	HA3004	M51150-01	108088-04
R115(T)/ RM115 R115C/R115CT/RM115C	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
R115CT	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-11
RH115DT	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	103896-01	108088-10 Metal 113279-03 Plastic
Mark 120D	097308-04	M27827-3	HA3003	M13038	M12462-5	M12951 (Left) M12952 (Right)	M12179	M12244-1	M14293	HA3019	M22456-3 Rotor M8643-3 Blades	M14259-1	M12820-4
RD125T	102001-30	116111-01	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-21	HA3004	106896-01	108088-12
RE125T	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-21	HA3004	106896-01	108088-12
RE125AT	102001-30	116111-01	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-21	HA3004	106896-01	108088-12
RH125T/RHD125/ RL125T	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
RH125AT	102001-30	104068-02	NA	097293-01	NA	HA1100	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
RHD125AT	102001-30	116111-01	NA	097293-01	NA	HA1100	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
RL125AT	102001-30	116111-01	NA	097293-01	NA	HA1100	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
PKHD125T	102001-30	116111-01	NA	097293-01	NA	HA1100	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
TKU125T	102001-30	116111-01	NA	097293-01	NA	HA1100	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
UKU125T	102001-30	116111-01	NA	097293-01	NA	HA1100	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
RH140VT	102001-30	104068-06	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-24	M16656-21	HA3004	106896-01	108088-12
Mark 140D	097308-04	M27827-3	HA3003	M14529	M12462-5	M12951 (Left) M12952 (Right)	M12179	M12244-1	M18048	HA3019	M22456-3 Rotor M8643-3 Blades	M16667-1	M12820-4
M150D / M150S	097308-04	102482-01	HA3003	M17058	Call	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
R150/R150A/ R150AT	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M19630	098513-11
R150B/R150BT R150D/R155	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M51150-01	108088-05
R150E	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3011	M16656-24	HA3004	M51150-01	108088-05
R150M	102762-02	100777-02	NA	097293-01	NA	HA3012	M12179	M12244-1	HA3011	103696-01	HA3004	M51150-01	098513-68
R150M2	097308-06	101551-02	NA	097293-01	NA	HA3012	M12179	M12244-1	HA3011	M16656-21	HA3004	M51150-01	079503-13AA
Mark 150D	097308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M16790-12	098513-11

**154009 is closest fit

REDDY LOW PRESSURE OIL (CONT)

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
PKHD170T	102001-30	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3004	106896-01	108088-12
R155A	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3011	M16656-24	HA3004	M51150-01	108088-05
R155B / RM155	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
R155C(T)/ RM155C(T)	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
R155D	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	106896-01	108088-10 Metal 113279-03 Plastic
R165 / R165T	102001-07	102482-01	HA3003	101897-01	097061-01	HA3012	M12179	M12244-1	HA3023	HA3019	HA3004	M51150-01	108088-05
R165A / R165AT	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-24	HA3004	M51150-01	108088-05
R165C(T)/ RM165C(T)	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
RD170T	102001-30	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3004	106896-01	108088-12
RE170T	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3004	106896-01	108088-12
RE170AT	102001-30	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3004	106896-01	108088-12
RH170T/RHD170T/ RL170T	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3004	106896-01	108088-12
RL170AT	102001-30	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3004	106896-01	108088-12
RH170AT	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3005	106896-01	108088-12
RHD170AT	102001-30	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3005	106896-01	108088-12
TKU170T	102001-30	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3005	106896-01	108088-12
UKU170T	102001-30	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3005	106896-01	108088-12
R200	102001-07	102482-01	HA3003	102042-01	097061-01	HA3012	M12179	M12244-1	100735-13	HA3019	HA3005	M51150-200	098513-86
R200A/R200AT R200BT/RM200AT	102001-27	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-24	HA3005	M51150-200	108088-06
RD200T	102001-27	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
RE200T	102001-27	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
RE200AT	102001-27	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
RH200VT/ RHD200VT	102001-27	104068-07	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
RH200AT / RHD200AT	102001-27	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
RHD200T	102001-27	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-24	HA3005	M51150-200	108088-12
RL200AT	102001-27	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
RM200T	102001-07	102482-01	HA3003	102042-01	097061-01	HA3012	M12179	M12244-1	100735-13	HA3019	HA3005	M51150-200	108088-06
PKHD200T	102001-27	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
TKU200T	102001-27	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
UKU200T	102001-27	116111-01	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12

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MASTER LOW PRESSURE OIL

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
B30	102762-01	102482-01	HA3003	M29678	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-41
B30C	102762-01	102482-01	M50230	M26317	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-41
B50	M31316	154009**	HA3003	M12431	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	M20371-1	098513-42
B50A	102762-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M30875	HA3019	HA3004	M50876-01	M30873-01BA
B50B	102762-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M30875	HA3019	HA3004	M50876-03	098513-42
B50D (Square Shell)	M31316	154009**	HA3003	M12431	M12462-5	HA3012	M11146-1	M15241	M11054-1	HA3019	HA3004	M50876-02	108088-02
B50D (Round Shell)	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	108088-02
B50E/B50F/B50G	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	108088-02
B50H	102001-28	104068-02	NA	M30884	NA	HA1000	M29633	M29612-01	HA3021	M16656-24	HA3005	M50876-02	108088-02
B50J/B55/B55B/ B55B /B55T/B60	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3024	M16656-24	HA3005	M50876-05	108088-03
B55CT	102001-28	104068-02	NA	103684-01	NA	"L" Shaped - HA1000 "Pencil" Shaped - HA1100	M29633	M29612-01	HA3024	M16656-24	HA3005	M50876-05	Metal 108088-19 Plastic 113279-01
BV60S	102001-14	102482-01	HA3003	M28730	107850-01	HA3012	M12179	M12244-1	M26313	HA3019	HA3004	M19630	M27553-04A
B65 / B65D	M31316	154009**	HA3003	M20517	M12462-5	HA3012	M11146-1	M15241	M26316	HA3019	HA3004	M19630	M10716-1A
B66D (Round End Cover)	102001-14	102482-01	HA3003	M25727	097061-01	HA3012	M29633	M29612-01	M26316	HA3019	HA3004	M19630	M27553-01AA
B66D (Rectangular End Cover)	102001-14	102482-01	HA3003	M25727	097061-01	HA3012	M12179	M12244-1	M26313	HA3019	HA3004	M19630	NLA
B70	M5721	M5301-1	M5761	M4502	NA	M4752-2	NA	NA	M5669	NA	M5703	M5763	M5723
B70B / B70BT	097308-02	102482-01	HA3003	M51107-01	097061-01	HA3012	M29633	M29612-01	HA3008	HA3019	HA3004	M50876-05	108088-03
B70D	102001-20	104068-02	NA	M29678	NA	HA1000	M29633	M29612-01	HA3026	M16656-24	HA3004	M50876-05	108088-03
B70DT	102001-20	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3026	M16656-24	HA3004	M50876-05	108088-03
B70ET	102001-29	104068-02	NA	M29678	NA	"L" Shaped - HA1000 "Pencil" Shaped - HA1100	M29633	M29612-01	HA3026	M16656-24	HA3004	M50876-05	Metal 108088-16 Plastic 113279-01
B75	M5721	M5301-1	M5761	M4502	NA	M4752-2	NA	NA	M5669	NA	M5703	M5855	M6620
B80	M21023-1	M27827-3	M3480	M14529	M12462-5	M8989 (Left) M8990 (Right)	M8849	M8764	M18048	M9211	M8644	M8796 M8643 Blades	M9228
B90	M21023-1	M27827-3	M3480	M14529	M12462-5	M8989 (Left) M8990 (Right)	M8849	M8764	M18048	M9211	M8644	M10808-1	M10780-1
B99 (With Electrodes)	M31316	M27827-3	NA	M14529	M12462-6	M8989 (Left) M8990 (Right)	M12179	M12244-1	M18049	NA	HA3004	M11932-1	M12377-1
B99 (With Spark Plug)	M31316	102482-01	100508-01	M14529	M12462-5	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
B99D	M31316	102482-01	HA3003	M14529	M12462-6	HA3012	M12179	M12244-1	M18048	HA3019	HA3004	M11932-1	M12321-1
B100	M31316	102482-01	HA3003	M23147	M12462-6	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M51150-01	M3292
B100AK	097308-06	102482-01	HA3003	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
B100A / B100B	097308-06	102482-01	097528-01	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
B100D	M31316	102482-01	097528-01	M23147	M12462-6	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04

MASTER LOW PRESSURE OIL (CONT)

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
B100G	097308-06	102482-01	HA3003	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
B100KD	097308-06	102482-01	HA3003	M23147	M12462-6	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
B110 / B110T	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
B110A	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3009	M16656-24	HA3004	M51150-01	108088-04
B110B(T)/B110C(T)	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
B115B(T)/B115C(T)	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
B115DT	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	106896-0	Metal 108088-11 Plastic 113279-02
B115T	102001-30	102482-03	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
BC100	M31316	102482-01	M50230	M23147	M12462-6	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	079725-03	098513-04
M100VT	102001-30	104068-06	NA	097293-01	NA	HA1000	M12179	M12244-1	100735-32	M16656-21	HA3004	106896-01	108088-12
B120	097308-04	M27827-3	HA3003	M13038	Call	M12951 (Left) M12952 (Right)	M12179	M12244-1	M14293	HA3019	M22456-3 Rotor M8643-3 Blades	M14259-1	M12820-4
BV125/BV125S	097308-04	102482-01	HA3003	M27982	Call	HA3012	M12179	M12244-1	100735-05	HA3019	M22456-3 Rotor M8643-3 Blades	079725-03	098513-04
M125T	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
M125AT	102001-30	104068-02	NA	097293-01	NA	HA1100	M12179	M12244-1	HA3027	M16656-21	HA3004	M51150-01	108088-12
B140 / B140D	097308-04	102482-01	HA3003	M17058	Call	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
M140VT	102001-30	104068-06	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-24	M16656-21	HA3004	106896-01	108088-12
B150	097308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
B150A	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
B150B/B150C/ B150CAK	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M19630	098513-11
B150D/B150KD	098308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
B150F/B150FT B150G/B150GT	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M51150-01	108088-05
B150H	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3011	M16656-24	HA3004	M51150-01	108088-05
B150J / B150JT	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
B150KD	097308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
B150M	102762-02	100777-02	NA	097293-01	NA	HA3012	M12179	M12244-1	HA3011	103698-01	HA3004	M51150-01	098513-68
B155T	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
B155BT	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
B155C / B155CT	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05

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MASTER LOW PRESSURE OIL (CONT)

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
B155DT	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	Metal 108088-10 Plastic113279-03
B165 / B165T	102001-07	102482-01	HA3003	101897-01	097061-01	HA3012	M12179	M12244-1	HA3023	HA3019	HA3004	M51150-01	108088-05
B165AT/B165C(T)	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3029	M16656-24	HA3004	M51150-01	108088-05
M170T	102001-30	104068-02	NA	102042-1	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3004	M51150-01	108088-12
M170AT	102001-30	104068-02	NA	102042-1	NA	HA1000	M12179	M12244-1	HA3029	M16656-21	HA3005	M51150-01	108088-12
B200	102001-07	102482-01	HA3003	102042-01	097061-01	HA3012	M12179	M12244-1	100735-13	HA3019	HA3005	M51150-200	098513-86
B200T	102001-07	102482-01	HA3003	102042-01	097061-01	HA3012	M12179	M12244-1	100735-13	HA3019	HA3005	M51150-200	108088-06
B200AT	102001-27	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-24	HA3005	M51150-200	108088-06
B200BT	102001-27	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-24	HA3005	M51150-200	Metal108088-17 Plastic113279-04
M200T	102001-27	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12
M200AT	102001-27	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	106896-01	108088-12
M200VT	102001-27	104068-07	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-21	HA3005	M51150-200	108088-12

REMINGTON LOW PRESSURE OIL

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
REM35 / REM35A	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3003	HA3019	HA3004	M50876-04	108088-01
REM35B	102001-28	104068-02	NA	M30884	NA	HA1000	M29633	M29612-01	HA3006	M16656-24	HA3004	M50876-04	108088-01
REM35C	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3006	M16656-24	HA3004	M50876-04	108088-01
REM40 / REM40T	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3006	M16656-24	HA3004	M50876-02	108088-01
REM50 / REM50A	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	098513-20
REM50B	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3021	HA3019	HA3005	M50876-02	108088-02
REM50C	102001-28	104068-02	NA	M30884	NA	HA1000	M29633	M29612-01	HA3021	M16656-24	HA3005	M50876-02	108088-02
REM55	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3021	HA3019	HA3005	M50876-05	108088-03
REM55-W	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3021	HA3019	HA3005	M50876-05	108088-03
REM55A	102001-28	104068-02	NA	M30884	NA	HA1000	M29633	M29612-01	HA3021	M16656-24	HA3005	M50876-05	108088-03
REM55B	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3024	M16656-24	HA3005	M50876-05	108088-03
REM60/REM60T	102001-28	104068-02	NA	103684-01	NA	HA1000	M29633	M29612-01	HA3024	M16656-24	HA3005	M50876-05	108088-03
REM100/REM100A	097308-06	102482-01	HA3003	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
REM110	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
REM110A	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3009	M16656-24	HA3004	M51150-01	108088-04

REMINGTON LOW PRESSURE OIL (CONT)

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
REM110B(T)/ REM110C(T)	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
REM115(T)/ REM115C(T)	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
REM150	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M19630	098513-11
REM150A/REM150B	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M51150-01	108088-05
REM150D	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3011	M16656-24	HA3004	M51150-01	108088-05
REM150E	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
REM155	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M51150-01	108088-05
REM155A	097308-06	104065-01	NA	097293-01	NA	102548-02	M12179	M12244-1	HA3011	M16656-24	HA3004	M51150-01	108088-05
REM155B	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
REM155C(T)	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
REM165	102001-07	102482-01	HA3003	101897-01	097061-01	HA3012	M12179	M12244-1	HA3023	HA3019	HA3004	M51150-01	108088-05
REM165C(T)	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05
REM200(T)	102001-07	102482-01	HA3003	102042-01	097061-1	HA3012	M12179	M12244-1	100735-13	HA3019	HA3005	M51150-200	098513-86
REM200AT	102001-30	104068-02	NA	102042-01	NA	HA1000	M12179	M12244-1	100735-13	M16656-24	HA3005	M51150-200	108088-06

CO-OP LOW PRESSURE OIL

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
CM30A	102762-01	102482-01	HA3003	M29678	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-41
C30C	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-04	108088-01
C50	M31316	154009**	HA3003	M12431	NA	HA3012	M11146-1	M15241	M11054-1	NA	HA3004	M19630	M10716-1
C50A	102762-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M30875	HA3019	HA3004	M50876-04	098513-42
C50B / C50C	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	098513-20
C50D	105336-01	102482-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26313	HA3019	HA3004	M50876-02	098513-20
C50S	105336-01	102482-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26313	HA3019	HA3004	M19630	M27549-01S
C65	M17491	154009**	HA3003	M20517	M12462-5	HA3012	M11146-1	M15241	M26313	HA3019	HA3004	M19630	M17016-45
C65S	M17491	154009**	HA3003	M20517	M12462-5	HA3012	M11146-1	M15241	M26313	HA3019	HA3004	M13846-1	M11636-34
C75	M31316	M27827-3	NA	M13580	M12462-5	M8989 (Left) M8989 (Right)	M12179	M12244-1	M18048	NA	HA3004	NA	NLA
C85	M31316	102482-01	NA	M14529	M12462-6	HA3012	M12179	M12244-1	M18048	NA	HA3004	079725-03	098513-04
C100 / C100S	M31316	102482-01	HA3003	M23147	M12462-6	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
C100C	097308-06	102482-01	097528-01	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
C140	097308-04	102482-01	NA	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	NA	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
C150 / C150S	097308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
C150C	097308-04	102482-01	HA3003	M17058	097061-01	HA0312	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04

**154009 is closest fit

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DESA LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
C35 / C35B	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3006	HA3019	HA3004	M50876-04	108088-01
C35A	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3006	HA3019	HA3004	M50876-02	108088-01
C50D / C50E	102001-28	102482-01	HA3003	M30884	NA	HA0313	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	098513-20
C50F	102001-28	102482-01	HA3003	M30884	NA	HA0313	M29633	M29612-01	HA3007	HA3019	HA3004	M50876-02	108088-02
C100D	097308-06	102482-01	097528-01	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
C100E / C100F	097308-06	102482-01	HA3003	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
C150D / C150E	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M19630	098513-11
C150F	097308-06	102482-01	HA3003	097293-01	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M51150-01	108088-05

KOEHRING LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
K30	102762-01	102482-01	HA3003	M29678	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-41
K50 / K50A	102762-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-42
KV60	102001-14	102482-01	HA3003	M28730	107850-01	HA3012	M29633	M29612-01	M26316	HA3019	HA3004	M19630	M27553-04BA
K100	M31316	102482-01	HA3003	M23147	Call	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M19630	098513-04
K100A	097308-06	102482-01	097528-01	M51153-01	097061-1	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
KV125	097308-04	102482-01	HA3003	M27982	Call	HA3012	M12179	M12244-1	HA3009	HA3019	M22456-3 Rotor M8643-3 Blades	079725-03	098513-11
K150	097308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11

QUEEN BEE LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
SB50 / SB50D	M31316	154009**	HA3003	M12431-2	M12462-5	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M20371-1	M17016-2
SB66 / SB66D	102001-14	102482-01	HA3003	M25727	107850-01	HA3012	M1217+9	M12244-1	M26313	HA3019	HA3004	M19630	M26224-1B
HB85 / HB85B	M31316	102482-01	HA3003	M14529	M12462-9	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
HB100 / HB100D	M31316	102482-01	HA3003	M23147	M12462-9	HA3012	M12179	M12244-1	M18048	HA3019	HA3004	M19630	098513-04
BB150 / BB150D	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	NLA

**154009 is closest fit

AMOCO LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
A50S	102001-14	102482-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26316	HA3019	HA3004	M19630	M27549-01S
AM50	M31316	154009**	NA	M12431	M12462-5	HA3012	M11146-1	M11054-1	NLA	NA	HA3004	M20371-1	M12416-G1
AM50D / AM50S	102001-14	1024821-01	HA3003	M25727	107850-01	HA3012	M12179	M12244-1	M26316	HA3019	HA3004	M19630	M26224-2B
AM65	M31316	154009**	NA	M20517	M12462-5	HA3012	M11146-1	M15241	M26316	NA	HA3004	M19630	M17016-1S
AM65S	M31316	154009**	HA3003	M20517	M12462-5	HA3012	M11146-1	M15241	M26316	HA3019	HA3004	M19630	M17016-4S
AM75	M31316	M27827-3	NA	M13580	M12462-2	M8989 (Left) M8990 (Right)	M8849	M15241	M18048	NA	HA3004	M13846-1	M11636-3
A100S	M31316	102482-01	HA3003	M23147	M12462-9	HA3012	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
AM100	M31316	102482-01	NA	M23147	M12462-9	HA3012	M12179	M12244-1	100735-05	NA	HA3004	M19630	098513-04
AM130	097308-04	M27827-3	NA	M17058	097061-01	M12951 (Left) M12952 (Right)	M12179	M12244-1	M14293	NA	M22456-3 Rotor M8643-3 Blades	M14259-1	M12820-4
AM150	097308-04	102482-01	NA	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	NA	M22456-3 Rotor M8643-3 Blades	M19630	098513-11
AM150S	097308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11

DART LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
DB30	102762-01	102482-01	HA3003	M29678	NA	HA3013	M29633	M29612-01	M29681	HA3019	HA3004	M50876-01	098513-41
DB50A	102762-01	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	M30875	HA3019	HA3004	M50876-01	098513-42
DBV60S	102001-14	102482-01	HA3003	M28730	107850-01	HA3012	M12179	M12244-1	M26316	HA3019	HA3004	M19630	M27553-04F
DB66C	102001-28	102482-01	M50230	M25727	107850-01	HA3012	M12179	M12244-1	M26316	097059-01	HA3004	079725-02	M27553-03B
DB66D	102001-14	102482-01	HA3003	M27527	107850-01	HA3012	M29633	M29612-01	M26316	HA3019	HA3004	M19630	M27553-01C
DB99 / DB99D	M31316	102482-01	HA3003	M14529	M12462-5	HA3012	M12179	M12244-1	M18048	HA3019	HA3004	M19630	098513-04
DB100D	M31316	102482-01	HA3003	M23147	M12462-16	HA0312	M12179	M12244-1	100735-05	HA3019	HA3004	M19630	098513-04
DB150D	097308-04	102482-01	HA3003	M17058	M12462-6	HA3012	M12179	M12244-1	HA3011	HA3019	M22456-3 Rotor M8643-3 Blades	M19630	098513-11

CENEX LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
CT35	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3006	HA3019	HA3004	M50876-04	108088-01
CT50	102001-28	102482-01	HA3003	M30884	NA	HA3013	M29633	M29612-01	HA3007	HAA3019	HA3004	M50876-04	098513-20
CT100	097308-06	102482-01	HA3003	M51153-01	097061-01	HA3012	M12179	M12244-1	HA3009	HA3019	HA3004	M51150-01	108088-04
CT150	097308-04	102482-01	HA3003	M17058	097061-01	HA3012	M12179	M12244-1	HA3011	HA3019	HA3004	M19630	098513-11

SUNBELT LOW PRESSURE

Model#	Motor	Transformer/ Ignition Control	Safety/Flame Out	Fan	Relay	Spark Plug / Electrode	Intake Filter	Output Filter	Nozzle	Photo Cell	Rotor Kit	Fuel Filter	Fuel Tank
SB115CT	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3027	M16656-24	HA3004	M51150-01	108088-04
SB155CT	102001-30	104068-02	NA	097293-01	NA	HA1000	M12179	M12244-1	HA3028	M16656-24	HA3004	M51150-01	108088-05

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MASTER HIGH PRESSURE

Model#	Motor	Transformer	Safety/Flame Out	Fan	Relay	Spark Plug/Electrode	Fuel Filter	Fuel Pump	Nozzle	Photo Cell	Solenoid	Switch: Fan/Limit
B100 / B100C B100F	M3294	M27827-3	M3374	M3243	M3480	M3268 (Left) M3269 (Right)	M51102-01	M3295	M3292	NA	M3338	NA
B125 / B125C	M3909	M27827-3	M5839	M3243	NA	M3981 (Qty 2)	M51102-01	M18972	M3107	M5654	M50077	NA
B150 / B150C	M9809-2	M27827-3	M4896	M3243	NA	M3981 (Qty 2)	M51102-01	M18972	M9108	M5654	M50077	M5895
B155 / B155A	M9809-2	M27827-3	M11309	M9928	M3480	M3981 (Qty 2)	M3301-1	M18972	M9108	NA	M3296	NA
B155C	M9808	M27827-3	M5653	M9928	M3480	M3981 (Qty 2)	M3301-1	M18972	M9108	M5654	M50077	NA
BV200	M18398	M27827-3	M13675	M11230-1	NA	M3981 (Qty 2)	M51102-01	M18972	M3107	M23802-2	M50077	NA
B220	M18894-2	M27827-3	M50230	M18878	M20302	M3981 (Qty 2)	M3301-1	M18972	M18876	NA	M50077	NA
B220S	M18894-2	M27827-3	M50230	M18878	M20302	M3981 (Qty 2)	M51102-01	M18972	M18876	NA	M50077	NA
BV250	M23357-1	M27827-3	M12657	M23377	M20302	M3981 (Qty 2)	M51102-01	Call	M27828	097059-01	M50077	NA
BV250AS	M23357-1	M27827-3	M50230	M23377	M20302	M3981 (Qty 2)	M51102-01	M18972	M25119	M29935	M50077	NA
B300 B300C	M23357-3	M27827-3	M50230	M23377	M20302	M3981 (Qty 2)	M51102-01	M18972	M25119	M29935	M50077	NA
B300D	M23357-1	M27827-3	M50230	M27555	M20302	M3981 (Qty 2)	M51102-01	M18972	M22626	097059-01	M50077	NA
B320	M6301	M27827-3	NA	M6303	NA	M3981 (Qty 2)	M51102-01	M18972	M22626	NA	M50077	NA
B325A B325AS	M18894-6	M27827-3	M50230	M19458	M20302	M3981 (Qty 2)	M51102-01	M18972	M22626	M29935	M50077	NA
B350 B350A	099562-01	102482-04	M50230	M50121	NA	HA3012	M51102-01	098560-01	M50112	HA3019	M50077	M51336-02
B350B	099562-01	102482-04	HA3003	M50121	097491-01	HA3012	M51102-01	098560-01	M50112	HA3019	M50077	M51336-02
B350D	099562-01	102482-04	HA3003	M50121	097491-01	HA3012	098102-01	098560-01	M50112	HA3019	M50077	M51336-02
SB350D	099562-01	102482-04	HA3003	M50121	097491-01	HA3012	110381-01	098560-02	M50112	M16656-17	M50077	M51336-02
BV400A BV400AS	M16006	M27827-3	M50230	M16050	M20302	M3981 (Qty 2)	M51102-01	M18972	M18303	M29935	M50077	NA
B500 B500A	M16006	M27827-3	M50230	M14968	M20302	M3981 (Qty 2)	098102-01	M18972	M14969	M29935	M50077	NA
B600 B600A	099562-02	102482-04	M50230	M50194	NA	M10962-2	M51102-01	098560-01	M30765	HA3019	M50077	M51336-02
B600B	099562-02	102482-04	HA3003	M50194	097491-01	M10962-2	M51102-01	098560-01	M30765	HA3019	M50077	M51336-02
B600D	099562-02	102482-04	HA3003	M50194	097491-01	M10962-2	098102-01	098560-01	M30765	HA3019	M50077	M51336-02
SB600D	099562-02	102482-04	HA3003	M50194	097491-01	M10962-2	110381-01	098560-02	M30765	104679-01	M50077	M51336-02

KNIPCO HIGH PRESSURE

Model#	Motor	Transformer	Safety/Flame Out	Fan	Relay	Spark Plug/Electrode	Fuel Filter	Fuel Pump	Nozzle	Photo Cell	Solenoid	Switch: Fan/Limit
F105	M9809-2	M27827-3	M3371	M3979	NA	M3981 (Qty 2)	M51102-01	M18972	M3295	NA	M50077	NA
F125 F125C	M9809-2	M27827-3	M4896	M3243	NA	M3981 (Qty 2)	M51102-01	M18972	M3107	NA	M50077	NA
F150 F150C	M9809-2	M27827-3	M5654	M3243	NA	M3981 (Qty 2)	M51102-01	M18972	M3107	NA	M50077	NA
F155 F155C	M9809-2	M27827-3	M5654	M9928	NA	M3981 (Qty 2)	M51102-01	M18972	M3107	NA	M50077	NA
FV200	M18398	M22827-3	M11231	M11230-1	NA	M3981 (Qty 2)	M51102-01	M18972	M3107	NA	M50077	NA
F220	M18398	M27827-3	M50230	M18878	M20302	M3981 (Qty 2)	M51102-01	M18972	M18876	NA	M50077	NA
F250	M18398	M27827-3	M5654	M6303	NA	M3981 (Qty 2)	M51102-01	M18972	M22626	NA	M50077	NA
F350	099562-01	102482-04	M50230	M50121	NA	HA3012	M51102-01	098560-01	M50112	HA3019	M50077	M51336-02

DART HIGH PRESSURE

Model#	Motor	Transformer	Safety/Flame Out	Fan	Relay	Spark Plug/Electrode	Fuel Filter	Fuel Pump	Nozzle	Photo Cell	Solenoid	Switch: Fan/Limit
DVB250C	M23357-1	M27827-3	M50230	M27555	M20302	M3981 (Qty 2)	M51102-01	M18972	M27828	097059-01	M50077	NA
DB300	M23357-1	M27827-3	M50230	M27555	M21686	M3981 (Qty 2)	M51102-01	M18972	M27828	097059-01	M50077	NA
DB500A	M16006	M27827-3	M50230	M14968	M20302	M3981 (Qty 2)	M51102-01	M18972	M124969	097059-01	M50077	NA
DB600	M16006	M27827-3	M50230	M14968	M20302	M3981 (Qty 2)	M51102-01	M18972	M30765	097059-01	M50077	M51336-02

KOEHRING HIGH PRESSURE

Model#	Motor	Transformer	Safety/Flame Out	Fan	Relay	Spark Plug/Electrode	Fuel Filter	Fuel Pump	Nozzle	Photo Cell	Solenoid	Switch: Fan/Limit
KV250	M23357-1	M27827-3	M50230	M23377	M20302	M3981 (Qty 2)	M51102-01	M18972	M25119	097059-01	M50077	NA
K350 K350A	099562-01	102482-04	M50230	M50121	NA	HA3012	M51102-01	098560-01	M50112	HA3019	M50077	M51336-02
K600	099562-02	102482-04	M50230	M50194	NA	HA3012	M51102-01	098560-01	M30765	HA3019	M50077	M51336-02

Scheu Oil Fired Heaters

National Riverside made some heaters to fire using a spark plug and others to fire using an electrode. It is important to verify that you have a new style or an old style heater prior to making any kind of service repairs or parts replacement. New style heaters have an octagon cover and old style heaters have a round cover.

National Riverside Name Brands Include:
All-Pro
Scheu Products
Universal
Mr. Heater

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. You can use the Quick Parts Reference Parts Guide located in the back of this section as an easy way to locate parts. If your model number does not appear in the breakdowns, please refer to the Quick Parts Reference Parts Guide for common replacement parts.

If you need technical assistance, feel free to call **PHP** at **1-800-362-6951**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service. You may also email your technical service questions to us at **techservice@portableheaterparts.com.**

HEATER INDEX

BTU Size and Description	Ignition Type	Reset Button	Page No.
50,000 - 150,000 New Style (Octagon cover)	Solid State	Yes	77
100,000 - 150,000 Old Style (Round cover)	Solid State	Yes	78
75,000 - 175,000	Solid State	Yes	79
150 - 275,000 Diesel	Solid State	Yes	80
Quick Parts Reference			**82**

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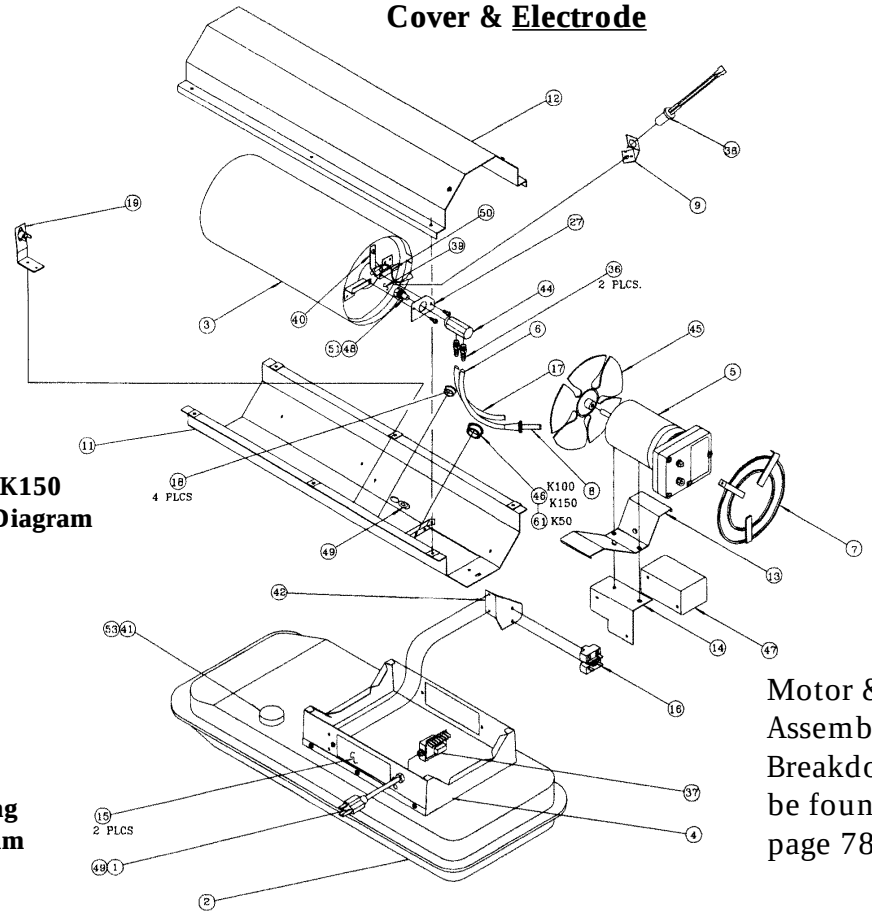
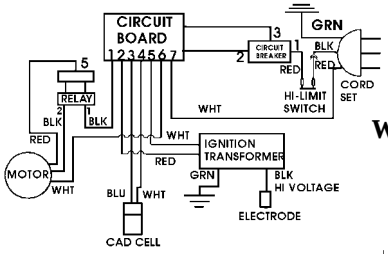
50-150,000 BTU Scheu Oil Fired Heater

Model Numbers

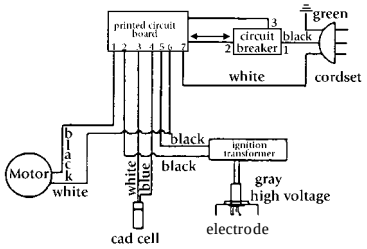
Universal	All Pro
K50FA/T	SPCK50
K100FA/T	SPCK100
K150FA/T	SPCK150

New Style with Octagon Cover & Electrode





K100/K150 Wiring Diagram



K50 Wiring Diagram

Motor & Pump Assembly Breakdown can be found on page 78.

Key No.	50K BTU Part No.	100K BTU Part No.	150K BTU Part No.	Description
1	1036NR	1036NR	1036NR	Power Cord Assembly
2	1676NR	1400NR	1400NR	Fuel Tank Assembly
3	1679NR	1773NR	1783NR	Radiation Shield Assy.
4	1688NR	1779NR	1782NR	Control Box Assembly
5	1682NR	1407NR	1407NR	Power Pac Assembly
6	1686NR	3429NR	3429NR	Fuel Tube
7	1685NR	1771NR	1768NR	Grille Assembly
8	-------	1408NR	1408NR	Fuel Filter Assembly
9	4011NR	4011NR	4011NR	Oil Cad Cell Bracket
11	1756NR	1777NR	3795NR	Bottom Shell
12	3715NR	3822NR	3810NR	Top Shell
13	3704NR	3500NR	3417NR	Motor Mounting Brkt.
14	3705NR	3818NR	3705NR	Ignition Mounting Brkt.
15	------	3427NR	3427NR	Access Panel
16	------	6864NR	6864NR	Start Relay
17	3725NR	3430NR	3421NR	Air Tube
18	6225NR	6225NR	6225NR	Snap Bushing
19	1796NR	1797NR	1798NR	High Limit Control Assy.
27	3761NR	3761NR	3761NR	Nozzle Mounting Plate
36	6856NR	6856NR	6856NR	Hose Barb Fitting
37	0854NR	0854NR	0854NR	Oil Flame Cntrl Assy.
38	6865NR	6865NR	6865NR	Cad Cell Flame Snsr.
39	------	1775NR	1719NR	Comb.Cmbr.Cyl. Assy.

Key No.	50K BTU Part No.	100K BTU Part No.	150K BTU Part No.	Description
40	3843NR	3843NR	3843NR	Electrode Mtg. Brkt.
41	6993NR	6993NR	6993NR	Oil Fuel Cap
42	------	3423NR	3423NR	Start Relay Brkt.
44	7417NR	7417NR	7417NR	Nozzle Adapter
45	7421NR	6885NR	6866NR	Fan
46	------	6227NR	6227NR	Snap Bushing
47	2138NR	2138NR	2138NR	Ignitor Assembly
48	7416NR	7538NR	7537NR	Fuel Air Aspir. Nozzle
49	6223NR	6223NR	6223NR	Strain Relief Bushing
50	1803NR	1803NR	1803NR	Electrode Assembly
51	7429NR	7429NR	7429NR	Extrnl. Retaining Ring
53	3487NR	3487NR	3487NR	Fuel Cap Gasket
*	3707NR	------	------	Left Side Panel
*	7094NR	------	------	Clip Handle Mtg.
*	7095NR	------	------	Handle, 3 piece
*		1942NR	1942NR	Knob Assembly
*		2098NR	2098NR	Thermostat Panel Assy.
*		3441NR	3441NR	Bracket Thermostat Mtg.
*		1734NR	1734NR	Thermostat Assembly
*		6070NR	6070NR	Clamp Loop

PARTS AVAILABLE - NOT SHOWN

APOS	Tune-up Kit
HA1180	0-15 P.S.I. Air Gauge
7399NR	Motor for SPCK50FA
6862	Fuel Grommet

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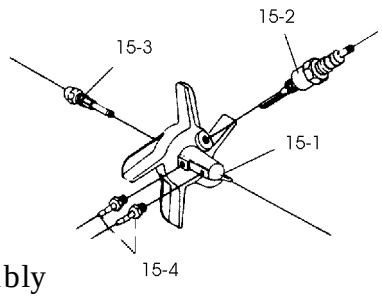
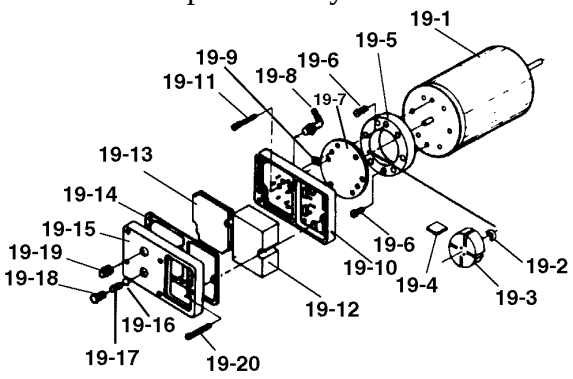
100-150,000 BTU Scheu Oil Fired Heater

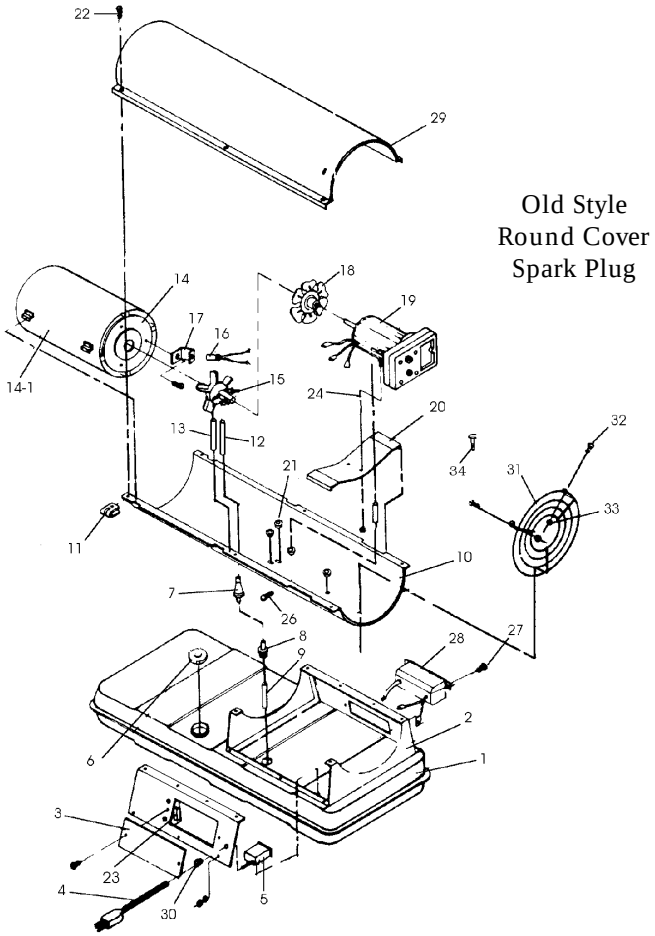
Model Numbers
Universal
K100FA
K150FA

Burner Assembly



Motor & Pump Assembly





Old Style
Round Cover
Spark Plug

Key No.	K100FA Part No.	K150FA Part No.	Description
1	1400NR	1400NR	Fuel Tank
2	1411NR	1403NR	Control Box
3	3427NR	3427NR	Panel Access
4	1036NR	1036NR	Power Cord
5	6863NR	6863NR	Flame Control Assy
6	6993NR	6993NR	Fuel Cap
7	6861NR	6861NR	Fuel Filter
8	6862NR	6862NR	Bushing, Filter
9	3419NR	3419NR	Hose Suction
10	3575NR	3574NR	Housing Bottom
11	6871NR	6871NR	Nut, U-Type (qty. 6)
12	3429NR	3429NR	Fuel Tube
13	3430NR	3421NR	Air Tube
14	1412NR	1405NR	Comb. Chamber Assy
14-1	1537NR	1536NR	Shield Radiation Assy
15	**Burner Assy**		
15-1	6883NR	6853NR	Casting
15-2	6855NR	6855NR	Spark Plug
15-3	6884NR	6854NR	Nozzle
15-4	6856NR	6856NR	Fitting, Hose Barb (qty. 2)
16	6865NR	6865NR	Flame Sensor
17	3414NR	3506NR	Bracket, Cad Cell
18	6885NR	6866NR	Fan Blade
19	1407NR	1407NR	Power Pac Assy.
19-1	154341	154341	Motor
19-2	6834NR	6834NR	Insert, Nylon
19-3	6831NR	6831NR	Rotor
19-4	6835NR	6835NR	Vanes
19-5	6833NR	6833NR	Cylinder, Air Pump
19-6	6906NR	6906NR	Screw, Machine (qty. 2)
19-7	6832NR	6832NR	Plate, Backing
19-8	6847NR	6847NR	Fitting, Hose Adapt.
19-9	6848NR	6848NR	O-Ring
19-10	6836NR	6836NR	Housing, Lower
19-11	6908NR	6908NR	Screw, Machine (qty. 6)
19-12	6844NR	6844NR	Inlet Filter
19-13	6843NR	6843NR	Outlet Filter

Key No.	K100FA Part No.	K150FA Part No.	Description
19-14	6839NR	6839NR	Gasket
19-15	6837NR	6837NR	Housing, Upper
19-16	6850NR	6850NR	Relief Ball
19-17	6851NR	6851NR	Spring
19-18	6842NR	6842NR	Adjusting Screw
19-19	6849NR	6849NR	Plug
19-20	6838NR	6838NR	Screw (qty. 5)
20	3437NR	3417NR	Bracket, Motor
21	6225NR	6225NR	Bushing, Snap (qty. 4)
22	6447NR	6447NR	Screw, Tapping (qty. 6)
23	6864NR	6864NR	Relay, Start
24	6048NR	6048NR	Lock Nut
26	6014NR	6014NR	Screw, Tapping
27	6015NR	6015NR	Screw, Tapping
28	154009	154009	Transformer
	3818NR	3818NR	Mounting Plate
29	3495NR	3495NR	Housing Top
30	6223NR	6223NR	Bushing, Strain Relief
31	7097NR	7096NR	Grille
32	6021NR	6021NR	Screw (qty. 3)
33	6037NR	6037NR	Nut (qty. 3)
34	NLA	NLA	Screw

PARTS AVAILABLE - NOT SHOWN
HA1180 0-15 P.S.I. Air Gauge

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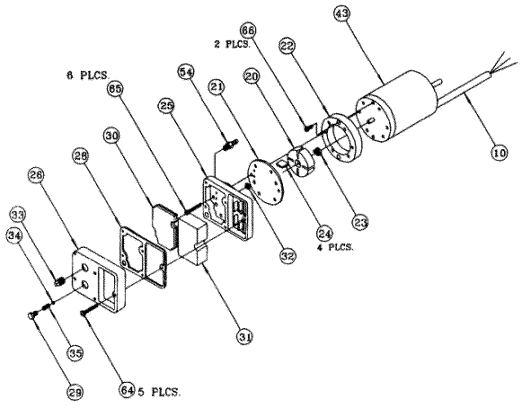
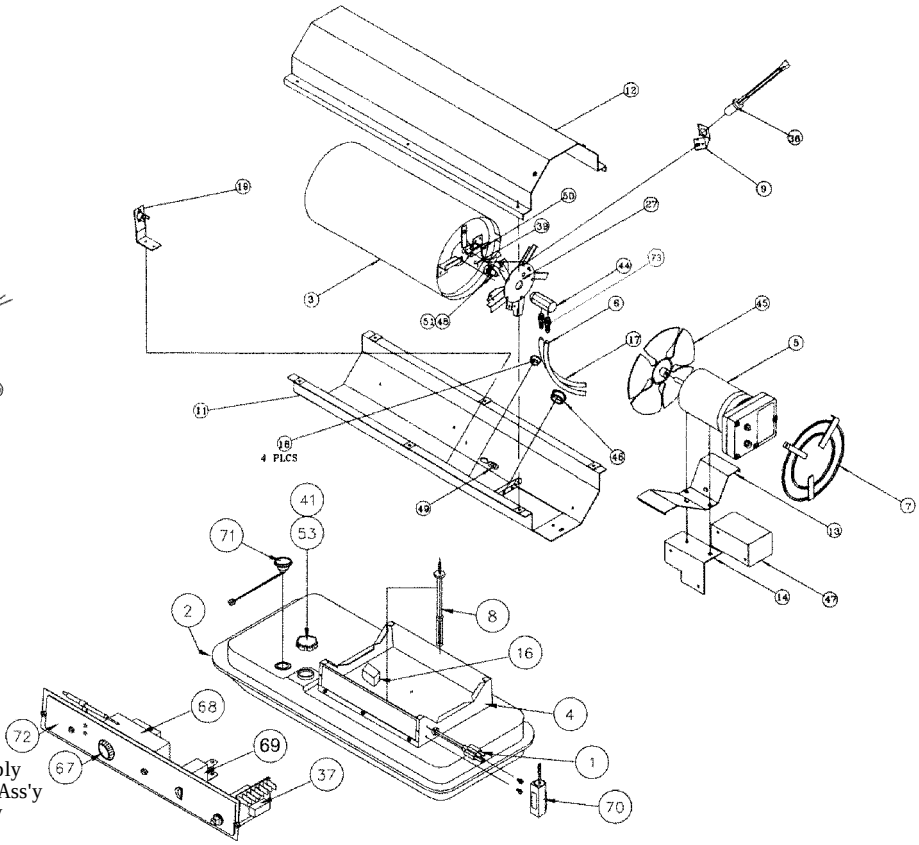
75-175,000 BTU Scheu Oil Fired Heater

Model Numbers

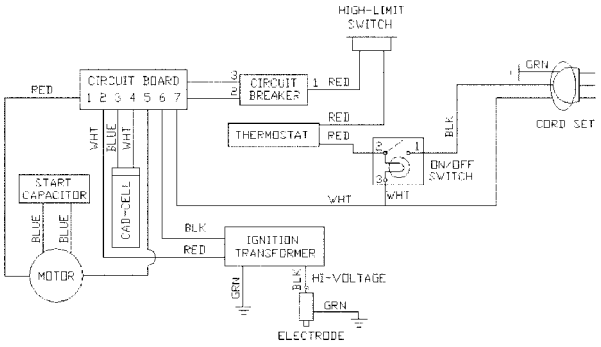
Universal	All-Pro
K75	SPCK75
K125	SPCK125
K175	SPCK175





Key No.	K75 Part	K125 Part	K175 Part	Description
1	1036NR	1036NR	1036NR	Power Cord
2	2213NR	2214NR	2214NR	Fuel Tank Assembly
3	2215NR	2216NR	1783NR	Radiation Shield Ass'y
4	2217NR	2218NR	2219NR	Control Box Ass'y
5	2258NR	2259NR	2259NR	Power Pac Ass'y
6	1686NR	4346NR	4346NR	Fuel Tube
7	8734NR	1771NR	1768NR	Grille Assembly
8	8779NR	8780NR	8780NR	Fuel Filter Assy
9	4011NR	4011NR	4011NR	Oil Cad Cell Bracket
10	3449NR	3449NR	3449NR	Motor Cord Sleeve
11	2223NR	1777NR	3795NR	Bottom Shell (Universal)
11-1	2224NR	1805NR	3846NR	Bottom Shell (All-Pro)
12	2225NR	3822NR	3810NR	Top Shell (Universal)
12-1	2226NR	3845NR	3847NR	Top Shell (All-Pro)
13	4332NR	4333NR	4334NR	Motor Mounting Bracket
14	3705NR	3818NR	3705NR	Ignition Mounting Brkt
16	8735NR	8735NR	8735NR	Start Capacitor
17	3725NR	4345NR	4345NR	Air Tube
18	6225NR	6225NR	6225NR	Snap Bushing
19	1796NR	1797NR	1798NR	High Limit Control
20	6831	6831	6831	Rotor Kit (includes #6834,6835)
21	6832NR	6832NR	6832NR	Backing Plate
22	6833NR	6833NR	6833NR	Air Pump Cylinder
23	6834	6834	6834	Nylon Air Pump Insert
24	6835	6835	6835	Air Pump Vane (4 ea.)
25	6836NR	6836NR	6836NR	Lower Housing
26	6837NR	6837NR	6837NR	Upper Housing
27	2257NR	2257NR	2257NR	Burner
28	6839NR	6839NR	6839NR	Gasket
29	6842NR	6842NR	6842NR	Adjusting Screw
30	6843NR	6843NR	6843NR	Outlet Filter
31	6844NR	6844NR	6844NR	Inlet Filter
32	6848NR	6848NR	6848NR	O Ring
33	6849NR	6849NR	6849NR	Nylon Pipe Plug
34	6850NR	6850NR	6850NR	Relief Ball, 1/4" Dia.
35	6851NR	6851NR	6851NR	Spring, 24 O.D. x .58
37	0854NR	0854NR	0854NR	Oil Flame Control Assembly
38	6865NR	6865NR	6865NR	Cad Cell Flame Sensor
39	2232NR	2233NR	2234NR	Comb. Chamber Cyl. Ass'y
41	6993C	6993C	6993C	Oil Fuel Cap
43	8737NR	8738NR	8738NR	Motor, 1/4 HP
44	7790NR	8739NR	8739NR	Nozzle Adapter
45	8740NR	6885NR	6866NR	Fan
46	------	6227NR	6227NR	Snap Bushing
47	2138NR	2138NR	2138NR	Ignitor Assembly
48	8715NR	8714NR	8710NR	Fuel Air Aspir. Nozzle

Key No.	K75 Part	K125 Part	K175 Part	Description
49	6223NR	6223NR	6223NR	Strain Relief Bushing
50	1803NR	2235NR	2235NR	Electrode Assembly
51	7429NR	7429NR	7429NR	Extrnl. Retaining Ring
53	3487NR	3487NR	3487NR	Fuel Cap Gasket
54	8744NR	8744NR	8744NR	Hose Barb Adapter
*	8745NR	6862NR	6862NR	Fuel Filter Bushing
64	6838NR	6838NR	6838NR	Screw, Tapping #9 x 1-1/4"
65	6908NR	6908NR	6908NR	Screw, Machine #10 x 1-1/4"
66	6906NR	6906NR	6906NR	Screw, Machine #10 x 1/2"
67	1942NR	1942NR	1942NR	Thermostat Knob
*	3441NR	3441NR	3441NR	Bracket Thermostat Mtg.
68	1734NR	1734NR	1734NR	Thermostat Assembly
*	6070NR	6070NR	6070NR	Clamp Loop
69	8785NR	8785NR	8785NR	ON/OFF Switch
70	8782NR	8781NR	8781NR	Pressure Gauge
71	8778NR	8778NR	8778NR	Fuel Gauge
72	4341NR	4342NR	4342NR	Access Panel
73	-------	8783NR	8783NR	Hose Barb Adaptor



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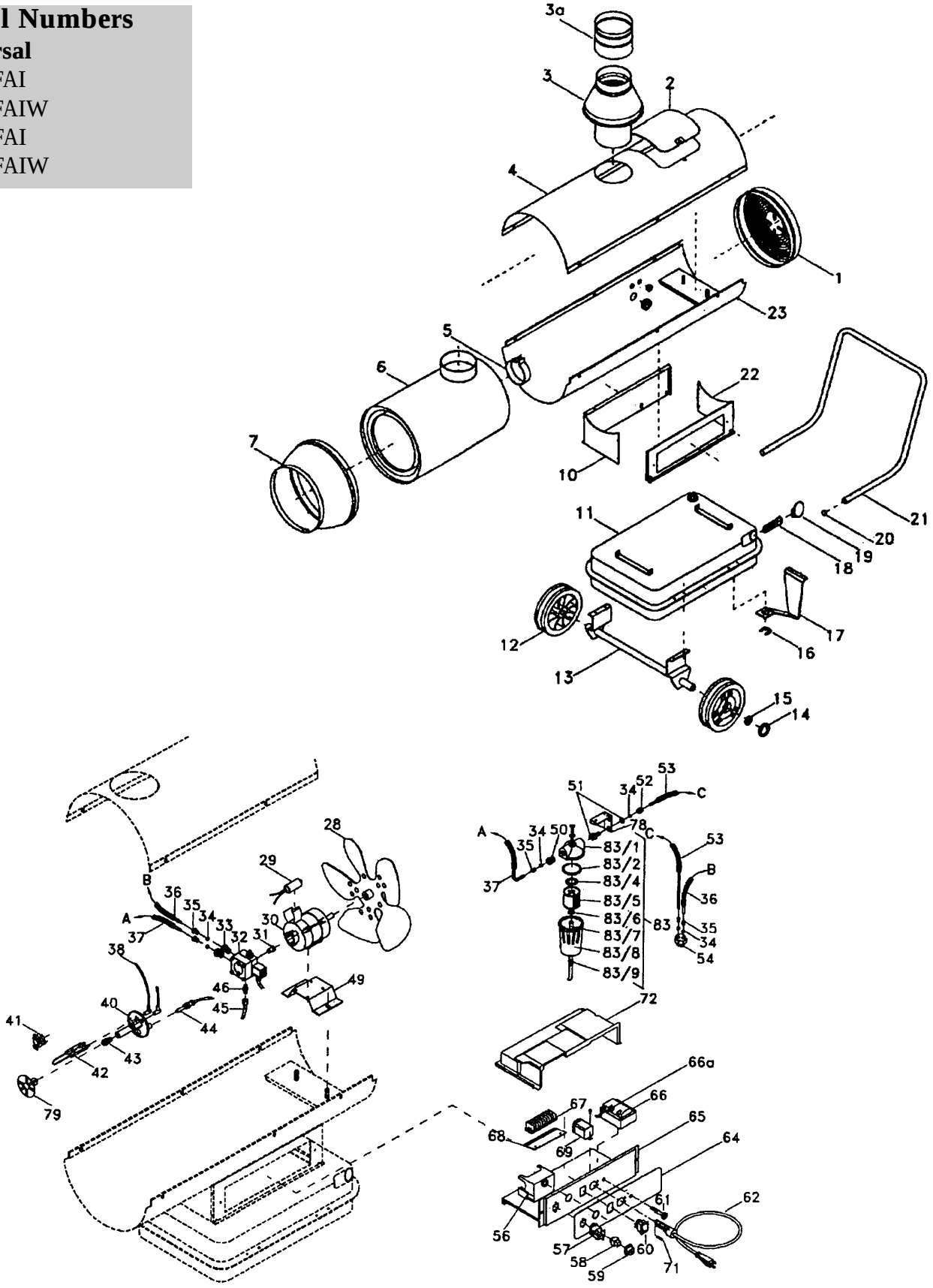
150-275,000 BTU Scheu Diesel Heater

Model Numbers
Universal
K150-FAI
K150-FAIW
K275-FAI
K275-FAIW



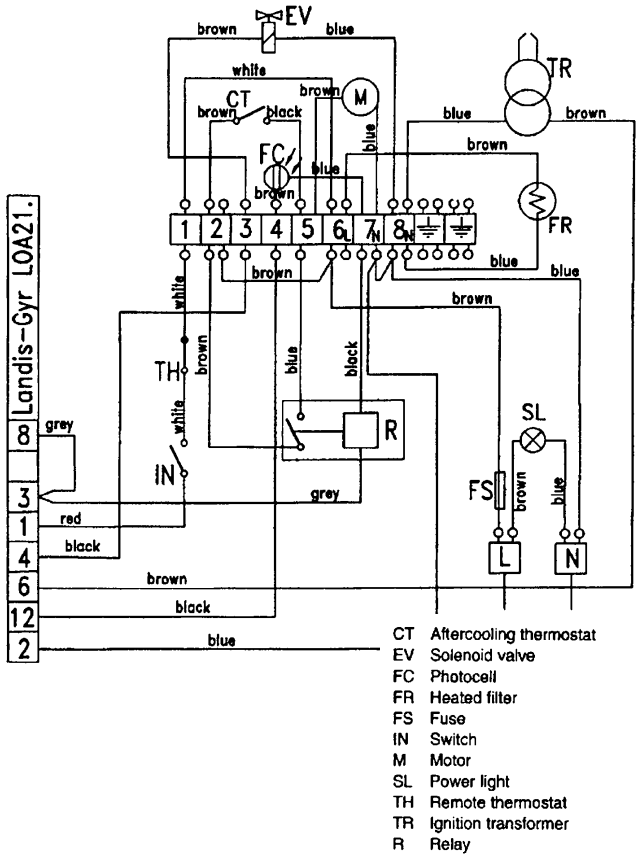
150-275,000 BTU Scheu Diesel Heater

Key No.	150K BTU Part No.	275K BTU Part No.	Description
1	8467NR	8468NR	Rear Grid
2	PORTISP#TOMM011NR	PORTISP#TOMG011NR	Inspection Cover
3	8420NR	8420NR	Exhaust Hood
3a	8421NR	8421NR	Stack Adapter
4	Call	Call	Cover
5	1094001700NR	1094001700NR	Air Lock
6	Call	Call	Combustion Chamber
7	8469NR	8470NR	Cone
10	Call	Call	Side Panel
11	Call	Call	Tank
12	8471NR	8471NR	Wheel D. 250 (qty. 2)
13	Call	Call	Axle
14	8472NR	8472NR	Wheel Cap (qty. 2)
15	8473NR	8473NR	Seeger Ring D.25 (qty. 2)
16	1023001500NR	1023001500NR	Spring
17	8474NR	8474NR	Tank Foot
18	8422NR	8422NR	Filter
19	8423NR	8423NR	Tank Cap
20	1005001000NR	1005001000NR	Handle Cap (qty. 2)
21	Call	Call	Handle
22	Call	Call	Side Panel
23	Call	Call	Lower Body
28	8424NR	8425NR	Fan D.300 23°
29	8426NR	8427NR	Capacitor 30uF
30	8428NR	8429NR	Motor 250W 115V 60Hz
31	8430NR	8431NR	Coupling
32	8432NR	8433NR	Oil Pump
33	1066001300NR	1066001300NR	Fitting (qty. 2)
34	1067009100NR	1067009100NR	Ferrule (qty. 2)
35	1066001600NR	1066001600NR	Fitting (qty. 2)
36	1078000500NR	1078000500NR	Back Flow Hose
37	1078000100NR	1078000100NR	Inlet Hose
38	8434NR	8434NR	HT Cable
40	1094002700NR	1094002700NR	Burner Head
41	8477NR	8477NR	Aftercooling Thermostat
42	8436NR	8436NR	Electrode
43	8437NR	8438NR	Nozzle 80°S
44	8439NR	8439NR	Flame Sensor
45	1076004300NR	1076004300NR	Microhose
46	1067004100NR	1067004100NR	Nipple
49	1094030200NR	1094030300NR	Motor Support
50	1066001400NR	1066001400NR	Fitting
51	1066001500NR	1066001500NR	Fitting (qty. 2)
52	1066001700NR	1066001700NR	Nut
53	8478NR	8479NR	Sucking Hose
54	1066001200NR	1066001200NR	Fitting
56	8440NR	8440NR	Flame Control Unit
57	8480NR	8480NR	Socket Casing
58	8481NR	8481NR	Socket
59	8482NR	8482NR	Socket Cap
60	8441NR	8442NR	Switch
61	1041001700NR	1041001700NR	Power Light
62	8443NR	8443NR	Power Cord
64	1105091100NR	1105091100NR	Panel Label
65	1094054900NR	1094054900NR	Control Panel
66	8444NR	8444NR	Transformer
66a	8445NR	8445NR	Transformer Cable
67	1034001600NR	1034001600NR	Terminal Board
68	1105091000NR	1105091000NR	Terminal Board Label
69	8446NR	8446NR	Relay
71	8452NR	8448NR	Fuse 15A

Key No.	150K BTU Part No.	275K BTU Part No.	Description
72	1001007500NR	1001007500NR	Cover
78	1094002400NR	1094002400NR	Filter Bracket
79	075018NR	075018NR	Baffle Plate
83	8449NR	8449NR	Oil Filter
83/1	1145000500NR	1145000500NR	Cover
83/2	8456NR	8456NR	O Ring
83/4	8457NR	8457NR	Gasket
83/5	8459NR	8459NR	Filter
83/6	8458NR	8458NR	O Ring
83/7	8450NR	8450NR	Cartridge
83/8	1135000600NR	1135000600NR	Filter Glass
83/9	1031000300NR	1031000300NR	Cable Clamp

ACCESSORIES

8347	Remote Thermostat with 25 ft. cord



Pump Pressure
K150FAI - 9.5 BAR (138 P.S.I.)
K275FAI - 12 BAR (175 P.S.I.)

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Scheu Quick Parts Reference Low Pressure Oil

Model#	Motor	Power Pack	Transformer	Fan Blade	Relay/Capacitor	Spark Plug/Electrode	Nozzle	High Limit	Thermostat	Other
K50FA (1994 ON)	7399NR	1682NR	2138NR & 3705NR Mtg Plate	7421NR	NA	1803NR Electrode	7416NR	1796NR	NA	7417NR Nozzle Adapter 1685NR Grill Assy 1676NR Fuel Tank
SPCK75 K75 (2003)	8737NR	2058NR	2138NR	8740NR	8735NR Capacitor	2235NR Electrode	8741NR	1796NR	1734NR	8778NR Fuel Gage 8782NR Pressure Gage 8785NR On/Off Switch
K100FA (Pre 1994)	6841NR	1407NR	2138NR & 3818NR Mtg Plate	6885NR	6882NR Relay	6855NR Plug	6884NR	NA	NA	Round Shell Model 7417NR Nozzle Adapter 6869NR Wheel (Qty 2)
SPCK100FAS (Post 1994)	6841NR	1407NR	2138NR	6885NR	6882NR Relay	1803NR Electrode	7538NR	1797NR	NA	Octagon Shell 6869NR Wheel (Qty 2) 7417NR Nozzle Adapter
SPCK100FAT	6841NR	1407NR	2138NR	6885NR	6882NR Relay	1803NR Electrode	7538NR	1797NR	1734NR	1400NR Fuel Tank 1942NR Thermostat Knob 6869NR Wheel (Qty 2)
SPCK125 K125 (2003)	8738NR	2059NR	2138NR	6865NR	8735NR Capacitor	2235NR Electrode	8742NR	1797NR	1734NR	8785NR On/Off Switch 8781NR Pressure Gage 8778NR Fuel Gage
K150FA (Pre 1994)	6841NR	1407NR	2138NR & 3705NR Mtg Plate	6866NR	6868NR Relay	6855NR Plug	6854NR	NA	NA	6869NR Wheel (Qty 2) 1696NR Grill Assy 1412NR Combustion Chamber
SPCK150FAS (Post 1994)	6841NR	1407NR	2138NR	6866NR	6868NR Relay	1803NR Electrode	7537NR	1798NR	NA	7417NR Nozzle Adapter 6869NR Wheel (Qty 2) 1768NR Grill Assy
SPCK150FAT	6841NR	1407NR	2138NR	6866NR	6868NR Relay	1803NR Electrode	7537NR	1798NR	1734NR	1942NR Thermostat Knob 7417NR Nozzle Adapter 6869NR Wheel (Qty 2)
SPCK175 K175FAT (2003)	8738NR	2059NR	2138NR	6866NR	8735NR Capacitor	2235NR Electrode	8743NR	1798NR	1734NR	8785NR On/Off Switch 8781NR Pressure Gage 8778NR Fuel Gage

All Of The Above Scheu Kerosene Heaters Have These Popular Parts In Common:
6863NR Safety Control, 6865NR Photo Cell, 6831NR Rotor, 6835NR Blades (Set of 4),
6844 Intake Filter, 6843 Output Filter, 6839 Pump Gasket, and 6861 Fuel Filter

Scheu Quick Parts Reference High Pressure Oil

Model#	Motor	Transformer	Safety/Flame Control	Fan	Relay	Electrode	Nozzle	Pump	Fuel Filter	Other
K150FAI	8428NR	8444NR	8440NR	8424NR	8446NR	8436NR	8437NR	8432NR	8449NR	8439NR Flame Sensor 8426NR Capacitor, 8441NR Switch, 8477NR Aftercooling Thermostat 8452NR Fuse, 8430NR Coupling
K275FAI	8429NR	8444NR	8440NR	8425NR	8446NR	8436NR	8438NR	8433NR	8449NR	8439NR Flame Sensor 8427NR Capacitor, 8442NR Switch, 8477NR Aftercooling Thermostat 8448NR Fuse, 8431NR Coupling
K350FAT	7939NR	2052NR	6863NR	7954NR	7944NR	7788NR	7950NR	7941NR	7942NR	6865NR Photocell 2061NR Solenoid Valve 7949NR Fan Switch 7951NR Wheel (Qty 2)
K650FAT	7939NR	2052NR	6863NR	7940NR	7944NR	7788NR	7945NR	7941NR	7942NR	6865NR Photocell 2061NR Solenoid Valve 7494NR Fan Switch

Toro Portable Heaters

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater.

If you need technical assistance, feel free to call **Portable Heater Parts at 1-800-362-6951or e-mail us at techservice@portableheaterparts.com**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Toro Name Brands Include:

Ace	Guardian
Agway	Huskee
Allis	Jim Dandy
Chalmers	Lawn Boy
Arctic Heat	Little Champ
Central	Montgomery
Tractor	Ward
Century	Mr. Heat
Champion	Porta Heat
Farm Heat	Red Line
Five Points	Stone
Ford	Toro
Gilson	Wheatbelt
Green Line	

HEATER INDEX

BTU Size and Description	Fuel Type	Page Number
40,000 Made prior to 1992	Kerosene	84
40,000 Made in 1992-1993	Kerosene	84
55,000 Made in 1992-1993	Kerosene	84
55,000 Made prior to 1992	Kerosene	86
60,000 Old Style IEF Series Model #I60EF	Kerosene	85
97,000 Old Style IEF Series Model #I101EF	Kerosene	85
100,000 Model	Kerosene	86
120,000 Air Scoop Transformer Flips to left	Kerosene	94
150,000 Old Style IEF Series Model #I151EF	Kerosene	85
150,000 Model	Kerosene	87
155,000 Air Scoop Transformer flips to the Left	Kerosene	94
155,000 Air Scoop Transformer flips to the Rear	Kerosene	96
225,000 Variable BTUs Model #'s 50230,33,54	Kerosene	88
230,000 Air Scoop Transformer flips to the Left	Kerosene	94
230,000 Air Scoop Transformer flips to the Rear	Kerosene	96
320,000 High Pressure	Kerosene	99
650,000 High Pressure	Kerosene	100
90,000 - 150,000 Gas Fired	Propane	101
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Toro Replacement Parts		19
Toro Service Information		18
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Toro Variable Output Component Test		22

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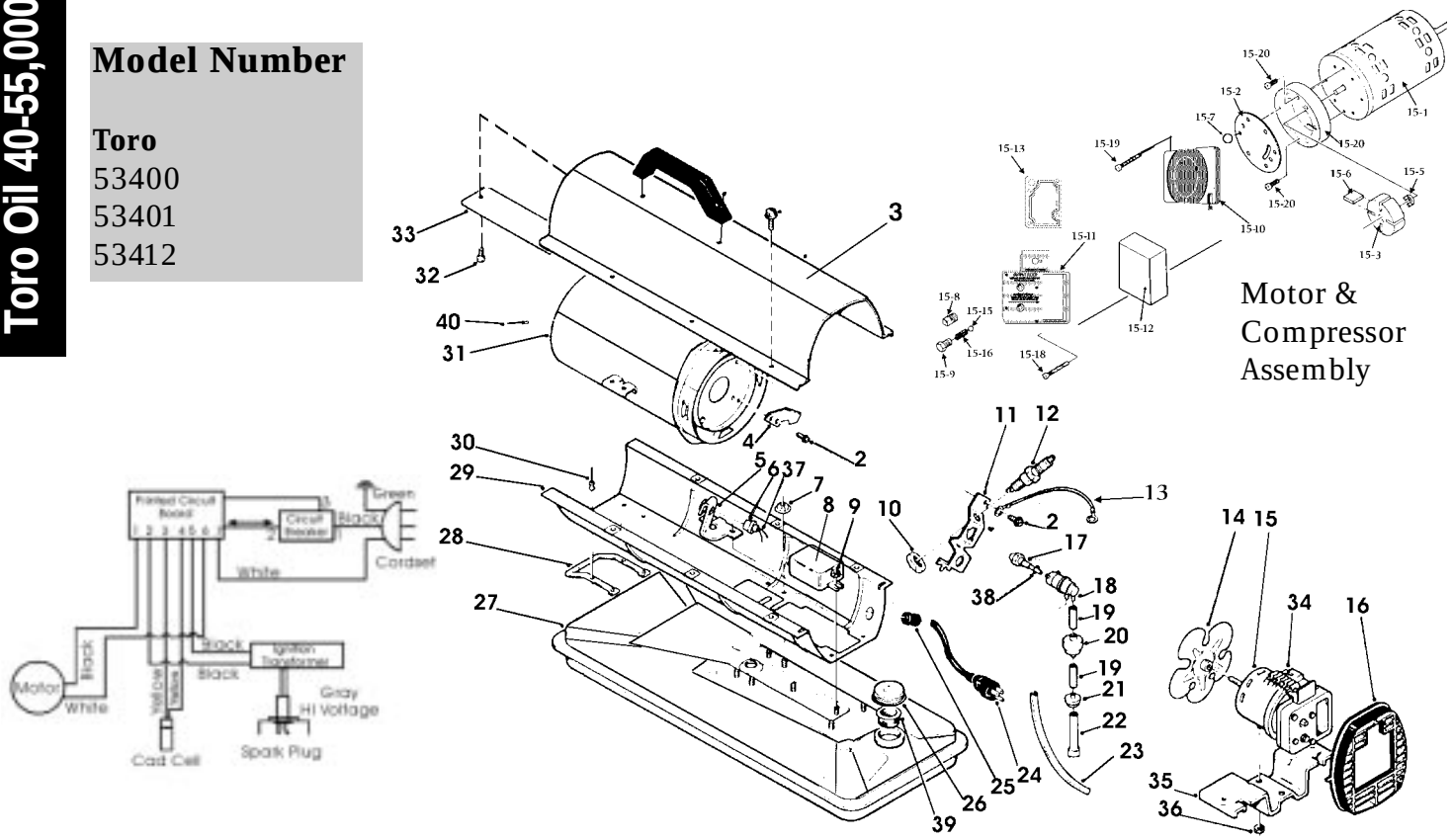
40-55,000 BTU Forced Air Toro Heaters (1992-1993)

Model Number

Toro
53400
53401
53412



Key No.	Part No.	Description
1	148538	Handle
2	147000	Screw
3	148585	Jacket, Upper
4	148552	Deflector, Rear Head
5	148684	Cad Cell bracket
6	154874	Cad Cell Assy
7	148539	Nut
8	73-7100	Transformer - NLA
9	147158	Nut
10	147635	Spark Plug Nut
11	148545	Bracket, Nozzle Plug
12	148544	Spark Plug (RN13LYC5)
13	154930	Ground Wire Assy
14	154900	Fan Assembly (40,000 BTU)
	154929	Fan Assembly (55,000 BTU)
15	154879	Compressor & Motor Assy
16	148537	Grille
17	154027	Nozzle Assembly (40,000 BTU)
	154881	Nozzle Assembly (55,000 BTU)
18	148530	Nozzle Adapter Kit
19	148648	Hose, Fuel Line
20	148647	Fuel Filter
21	148546	Grommet
22	148645	Pickup Tube (40,000 BTU)
	148646	Pickup Tube (55,000 BTU)
23	148649	Hose-Air Line
24	154878	Power Cord Assembly
25	147053	Strain Relief
26	154021	Fuel Cap (includes 148317 fuel gasket)
27	154867	Fuel Tank Assy (40,000 BTU)
	154868	Fuel Tank Assy (55,000 BTU)

Key No.	Part No.	Description
28	148650	Front Guard
29	148586	Lower Jacket
30	702365	Rivet
31	154884	Combustion chamber & heat shield Assy
32	148547	Screw
33	148540	Handle Support
34	154348	P.C. Board w/Breaker Assy
35	148531	Motor Mount
36	147004	Nut
37	154877	Wire Assembly
38	147082	O-Ring
39	154685	Strainer-Fuel (Optional)
40	147083	Rivet
MOTOR & COMPRESSOR ASSEMBLY		
15-1	154876	Motor 1/15 H.P., 115V 60Hz
15-2	154797	Backing Plate
15-3	73-6420	Rotor 5/8”
15-4	147003	Body Ring 5/8”
15-5	73-6430	Insert (Black)
15-6	154616	Vane 5/8” (Set of 4)
15-7	73-6440	O-Ring
15-8	147009	Plug 1/4 NPT
15-9	147010	Adjusting Screw
15-10	148420	Filter Housing-Bottom
15-11	148419	Filter Housing-Top
15-12	148442	Input Filter
15-13	154822	Output Filter Kit
15-15	147022	Relief Ball
15-16	147021	Relief Spring
15-18	148233	Screw (qty. 4)
15-19	148394	Screw

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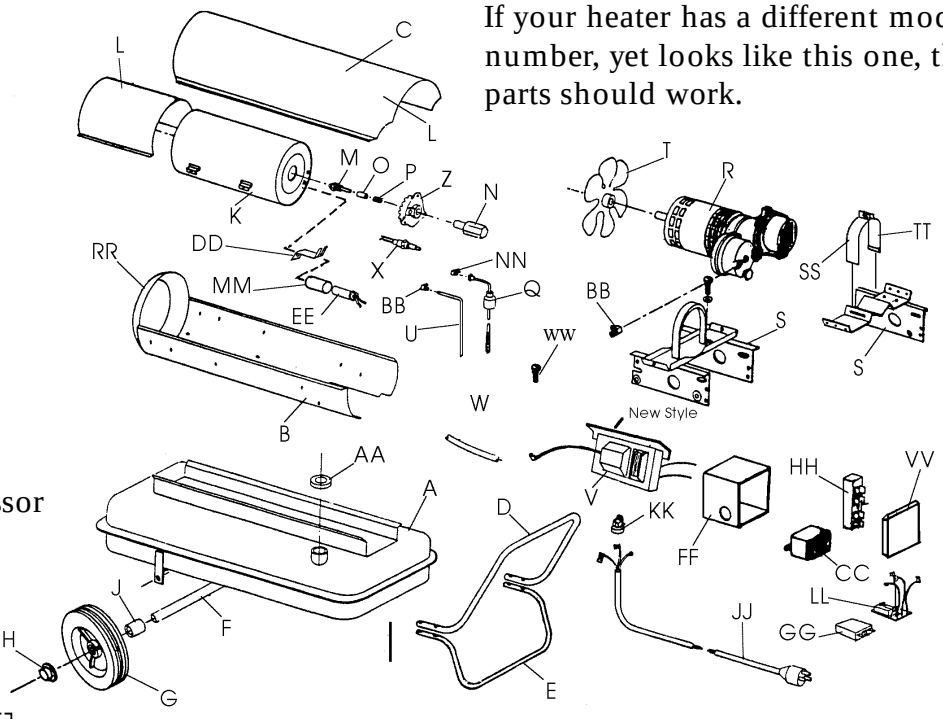
60, 97, 150,000 BTU Forced Air Toro Heaters
(Older Style "Champion" Heaters)

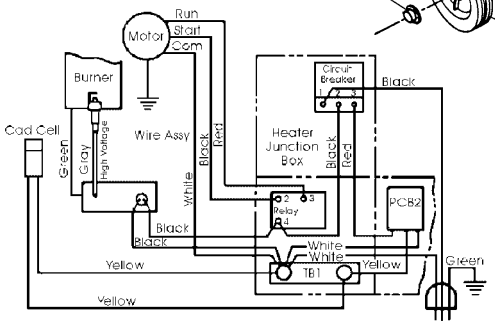
Model Numbers
Toro
I-60EF Inline
I-101EF Inline
I-151EF Inline

PSI Setting	
I60EF	4
I101EF	5
I151EF	5

See page 90 for Compressor Assembly Parts.

If your heater has a different model number, yet looks like this one, these parts should work.





Heater Size		60,000 btu	97,000 btu	150,000 btu
Ref No.	Possible Model Description	I-60EF Part No.	I-101EF Part No.	I-151EF Part No.
A	Tank Assembly	154371	154372	154372
B	Jacket Bottom Ay	220567	154437	220569
C	Jacket Top	147752	147756	147754
D	Handle	147775	147123	147123
E	Front Support	147735	147761	147761
F	Axle	147776	147122	147122
G	Wheel	154902	154902	154902
H	Push Nut	147157	147157	147157
J	Spacer	147688	147688	147688
K	Combustion Chamber	154022	73-8620	154055
L	Com. Cham. Shield	N/A	N/A	154382
M	Nozzle	147862	147863	147840
N	Nozzle Adapter	147798	147798	147798
O	Nozzle Seal	154603	154603	154603
P	Nozzle Seal Spring	147692	147692	147692
Q	Fuel Lift Tube Ay.	154512	154364	154364
R	Motor & Comp Ay.	See page 88		
S	Motor Mount	154511	154511	222126
T	Fan	154023	154032	154043
U	Air Line	147799	147800	147802
V	Transformer	154009	154009	154009

Heater Size		60,000 btu	97,000 btu	150,000 btu
Ref No.	Possible Model Description	I-60EF Part No.	I-101EF Part No.	I-151EF Part No.
W	Insulator	222924	222924	222924
X	Spark Plug	147080	147080	147080
Z	Burner	147730	147769	147769
AA	Fuel Cap	154021	154021	154021
BB	1/4 CC x 1/8 IP Elbow	147014	147014	147014
CC	Relay	154600	154600	154383
DD	Cad Cell Bracket	147699	147699	147699
EE	Cad Cell	154709	154709	154709
FF	Junction Box Ay.	154514	154514	154514
GG	Reset Breaker	154012	154012	154012
HH	Terminal Block	154502	154502	154502
JJ	Cord Assembly	154423	154423	154423
KK	Strain Relief	147921	147921	147921
LL	Circuit Board	154361	154361	154361
MM	Hood	147367	147367	147367
NN	1/4 FL x 1/8 IP Elbow	219999	219999	219999
SS	Strap Assembly	221894	221894	222010
TT	Strap	221895	221895	222009
UU	Cover Plate	N/A	N/A	N/A
VV	Cover, Junction Box	147922	147922	147922
WW	Screw	N/A	N/A	N/A

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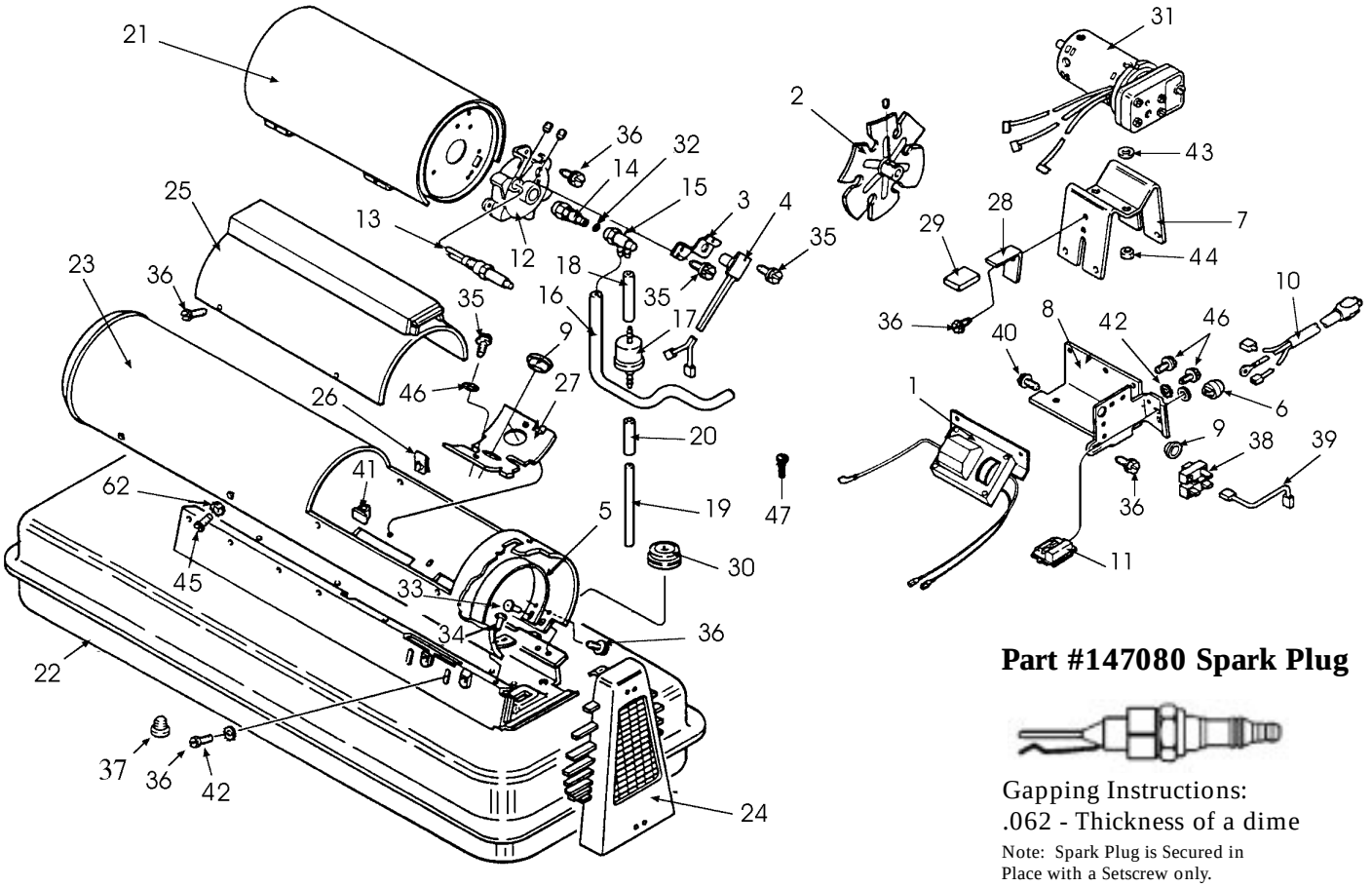
40-150,000 BTU Forced Air Toro Heater



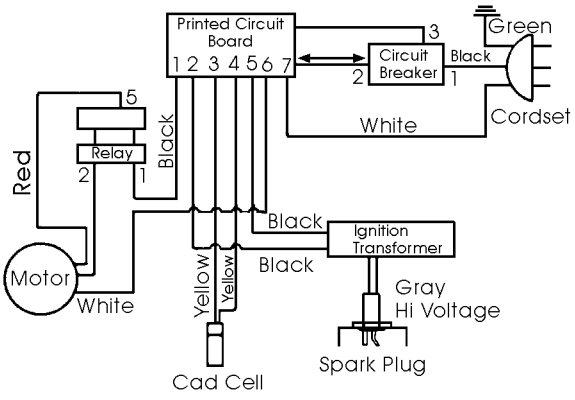
Part #147080 Spark Plug

Gapping Instructions:
.062 - Thickness of a dime

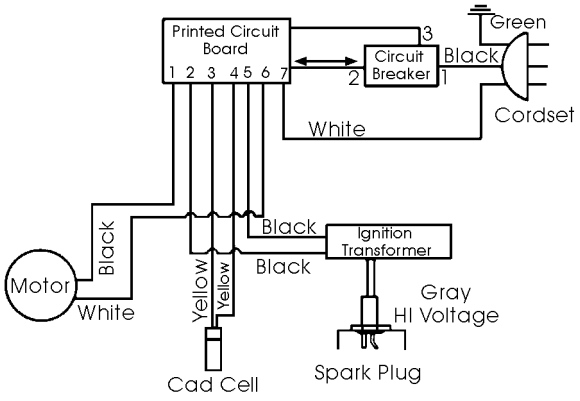
Note: Spark Plug is Secured in Place with a Setscrew only. Line up red mark on plug with notch on burner head.

See page 90 for motor/pump assembly

Wiring Diagram
97,000 - 150,000 BTU
1986 - Current



Wiring Diagram
40,000 & 55,000 BTU
1986 - Current



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40,000 to 150,000 Toro Heater Parts Listing

Key No.	Part No.	Description
1	154009	Transformer
2	154006	Fan (40,000 BTU)
	154023	Fan (55,000 BTU)
	154032	Fan (97-100,000 BTU)
	154043	Fan (150,000 BTU)
3	147028	Cad Cell Bracket
4	154709	Cad Cell
5	147047	Fan Guard (40,000 BTU)
	147098	Fan Guard (55-100,000 BTU)
	147153	Fan Guard(150,000 BTU)
6	147053	Strain Relief Bushing
7	147005	Motor Mount
8	73-6460	Transformer Mount
9	147054	Bushing
10	154008	Cord Assembly
11	154348	Printed Circuit Board with Breaker
12	154019	Burner with Set Screw
13	147080	Spark Plug
14	154027	Nozzle (40,000 BTU)
	154028	Nozzle (55,000 BTU)
	154030	Nozzle (100,000 BTU)
	154060	Nozzle (150,000 BTU)
15	147081	Nozzle Adapter
16	73-6520	Airline
17	147046	Fuel Filter
18	73-6520	Upper Fuel Tube
19	73-6450	Copper Fuel Tube (40-55,000 BTU)
	147126	Copper Fuel Tube (100-150,000 BTU)
20	147038	Lower Fuel Tube
21	154020	Combustion Chamber (40,000 BTU)
	154022	Combustion Chamber (55,000 BTU)
	154031	Combustion Chamber (100,000 BTU)
	154055	Combustion Chamber (150,000 BTU)
22	154138	Tank Assembly w/Decal (40,000 BTU)
	154141	Tank Assembly w/Decal (55,000 BTU)
	154140	Tank Assembly w/Decal (100,000 BTU)
	154139	Tank Assembly w/Decal (150,000 BTU)
23	154017	Jacket Assembly (40,000 BTU)
	154024	Jacket Assembly (55,000 BTU)
	154034	Jacket Assembly (100,000 BTU)
	154453	Jacket Assembly (150,000 BTU)
24	73-7030	Grille Assembly (40,000 BTU)
	73-7010	Grille Assembly (55,000 & 100,000 BTU)
	73-7020	Grille Assembly (150,000 BTU)
25	154131	Access Cover w/Label (Red 40,000 BTU)
	154135	Access Cover w/Label (Red 55,000 BTU)
	154137	Access Cover w/Label (Green 100,000 BTU)
	154130	Access Cover w/Label (Lawn Boy Green 100 BTU)
	154131	Access Cover w/Label (Red 100,000 BTU)
	154129	Access Cover w/Label (Silver 100,000 BTU)
	154137	Access Cover w/Label (Green 150,000 BTU)
	154130	Access Cover w/Label (Lawn Boy Green 150 BTU)
	154409	Access Cover w/Label (Red 150,000 BTU)
	154129	Access Cover w/Label (Silver 150,000 BTU)

Key No.	Part No.	Description
26	147025	Clip, Tinnerman
27	147049	Insert
28	147001	Jacket Brace (40,000 BTU)
	147120	Jacket Brace (55-100,000 BTU)
	147133	Jacket Brace (150,000 BTU)
29	147002	Grip, Jacket Brace
30	154021	Cap, Tank
31	**Motor/Compressor Assembly (available as parts only)**	
	See page 89 for individual part numbers	
	154368	40,000-55,000 BTU
	154345	100,000 B TU
	154342	150,000 BTU
32	147082	Nozzle “O” Ring
33	700218	Rivet
34	146489	Rivet
35	147024	Cap Screw, #8 x 3/8”
36	147000	Cap Screw, #10-24 x 1/2”
37	154796	Drain Plug (100-150,000 BTU Only)
38	154039	Relay (Black Motor - 100,000 BTU)
	154600	Relay (Gray Motor - 100,000 BTU)
	154052	Relay (Black Motor - 150,000 BTU)
	154383	Relay (Gray Motor - 150,000 BTU)
39	154040	Wire Assembly
40	147118	Screw, Hex Head #8 x 3/8”
41	147229	Super Clip (150,000 BTU Only)
42	147119	Washer, Ext Tooth lock #10
43	700324	Washer, Flat SAE 1/4-20
44	147004	Nut, Ext Tooth Lock #8
45	147041	Washer, Ext Tooth Lock #8
46	146502	Washer
47	NLA	Screw
	Parts Available Not Shown	
	154423	6' Power Cord
	154902	Wheels (100,000 & 150,000 BTU Only)
	147122	Axle (100,000 & 150,000 BTU Only)
	147157	Pushnut for wheel (100,000 & 150,000 BTU Only)
	147123	Top Handle(100,000 & 150,000 BTU Only)
	147125	Tank Support (100,000 & 150,000 BTU Only)
	147121	Screw for handle (100,000 & 150,000 BTU Only)
	147158	Nut for handle (100,000 & 150,000 BTU Only)
	HA1210	Thermostat - Degrees on Dial
	KT121	Thermostat - Warmer/Colder

Air Pressure Settings

BTU	PSI
40-55,000	3
100,000	5.5
150,000	6.25

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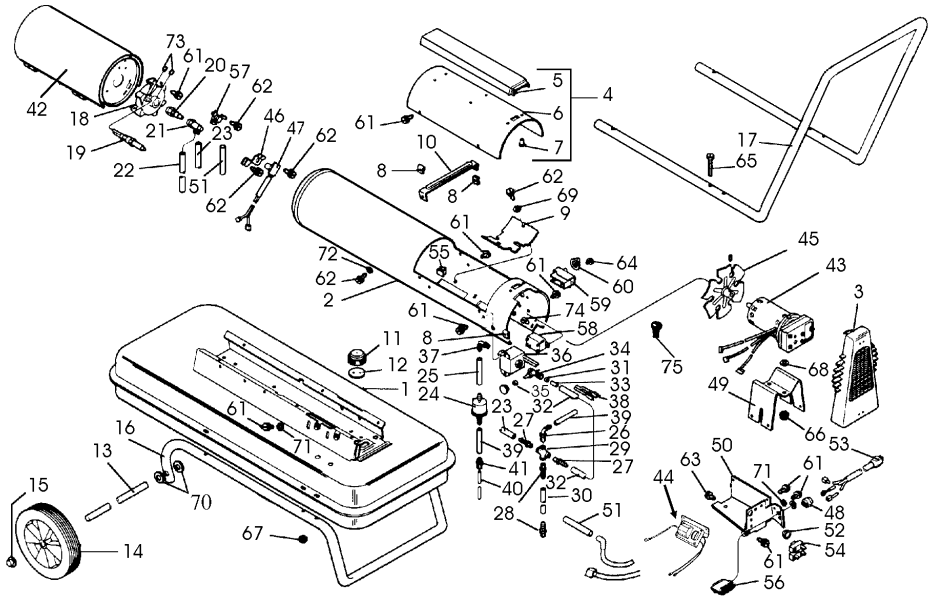
175-225,000 BTU Forced Air Heater

Model Number

50230
50233
50254

The model numbers on the left is the actual breakdown. If your heater has a slightly different Model#, or if you have a 220,000 BTU Heater, most of the parts are interchangeable.

See Page 89 for wiring diagram.
See Page 91 for Pump Assembly Parts.



Key No.	Part No.	Description
1	154381	Tank Assembly w/Decal
2	154089	Jacket & End Ring Assembly w/Decal
3	154044	Grille Assembly
4	154397	Access Cover Assembly w/Decal
5	154026	Trim Channel
6	154397	Access Cover
7	73-6470	Rivet
8	147025	Tinnerman Clip
9	147049	Insert
10	147174	Jacket Brace
11	154021	Fuel Tank Cap
12	148317	Fuel Cap Gasket
13	147257	Axle
14	154061	Wheel
15	147157	Pushnut
16	147228	Tank Support
17	147177	Handle
18	154019	Burner
19	147080	Spark Plug
20	154060	Nozzle
21	147081	Nozzle Adaptor
22	73-6520	Air Line
23	73-6520	Nozzle Tube
24	147046	Fuel Filter
25	73-6520	Filter Tube
26	147183	Elbow Adaptor
27	147184	Adaptor
28	147725	Adaptor
29	147726	Cross
30	147713	Return Tube
31	147727	Sleeve
32	147728	Valve Hose
33	147714	Copper Tube
34	154398 or 240293	Valve
35	147715	Valve Spacer
36	154776	Fuel Pump
37	147014	Elbow Adaptor

* May be purchased at a local hardware store

Key No.	Part No.	Description
38	147146	Terminal Spade
39	73-6520	Inlet Hose
40	147166	Lift Tube
41	154074	Fitting
42	154078	Combustion Chamber Assembly
43	See page 89 for Motor & Compressor Assembly	
44	154009	Transformer
45	154431	Fan
46	147028	Cad Cell Bracket
47	154709	Cad Cell Board Assembly
48	147053	Strain Relief
49	147005	Motor Mount
50	73-6460	Transformer Mount
51	147710	Fiberglass Sleeving
52	147054	Shorty Bushing
53	154075	Cord Assembly
	154423	6 ft Power Cord
54	154052	Relay
55	147229	Super Clip
56	154348	P.C. Board w/Breaker
57	154065	Limit Switch
58	154063	Relay: used on gray Robbins Meyers motor
	154052	Relay: used on black Fasco motor
59	154088	Thermostat
60	154072	Knob
61	147000	Thread Forming Screw
62	147024	Thread Forming Screw
63	147118	Screw
64	147164	Screw
65	71136	*Machine Screw, slotted hex head #10-24 x 2 1/4”
66	147004	*Hex Nut
67	147158	*Hex Nut
68	70683	*Flat Washer, SAE 1/4 plated
69	70682	*Flat Washer, SAE #10 plated
70	70707	*Washer, Flat, 1/2 plated
71	147119	*Washer
72	147041	*Washer
73	235466	Rivet
74	146489	Rivet
75	NLA	Screw

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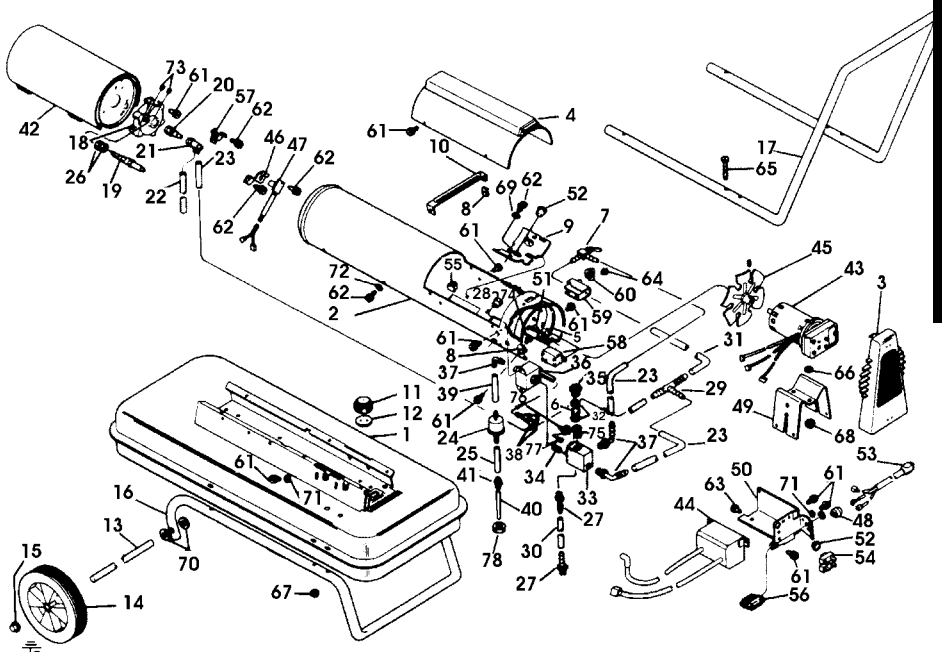
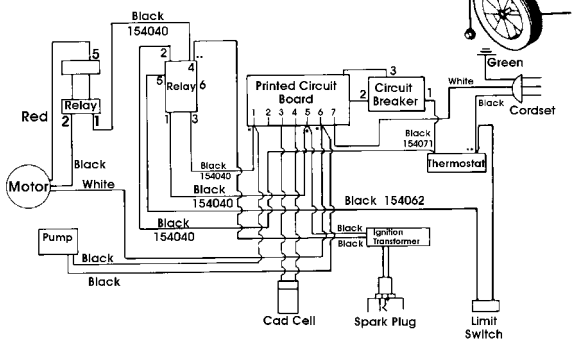
175-225,000 BTU and 220,000 BTU Heater
Forced Air Heaters

Model Number

50230A
50233A
50254A

For part numbers for the motor and filter assembly, see page 91 and look under the 150,000 BTU column





Key No.	Part No.	Description	Key No.	Part No.	Description	Key No.	Part No.	Description
1	154381	Tank and Decal	29	147849	Tee	56	154348	P.C. Board w/Breaker
2	154526	Jacket & End Ring	30	147162	Return Hose	57	154065	Limit Switch
3	154044	Grille	31	73-6520	Hose	58	154063	Relay: used on gray
4	154033	Access Cover	32	147168	Disc. Steel			Robbins Meyers motor
5	147153	Fan Guard	33	147924	Reservoir		154052	Relay: used on black
6	147169	Disc,Felt	34	147165	Close-Nipple			Fasco motor
7	154606	Heat Control Valve	35	147355	Plug	59	154088	Thermostat
8	147025	Tinnerman clip	36	154776	Fuel Pump	60	154072	Knob
9	147049	Insert	37	147014	Elbow Adapter	61	147000	Screw
10	147174	Jacket Brace	38	147146	Terminal, Spade	62	147024	Screw
11	154021	Fuel Tank Cap	39	73-6520	Inlet Hose	63	147118	Screw
12	148317	Fuel Cap Gasket	40	147166	Lift Tube	64	147164	Screw
13	147257	Axle	41	154074	Fitting	65	71136	Screw
14	154061	Wheel	42	154078	Combustion Chamber	66	147004	Nut
15	147157	Pushnut	43	154342	Motor & Compressor	67	147158	Nut
16	147228	Tank Support		(See page 89 in Tech Svc Cat.)		68	700324	Washer
17	147177	Handle	44	154009	Transformer	69	146502	Washer
18	154019	Burner	45	154043	Fan	70	700049	Washer
19	147080	Spark Plug	46	147028	Cad Cell Bracket	71	147119	Washer
20	154060	Nozzle	47	154709	Cad Cell Board Assy.	72	147041	Washer
21	147081	Nozzle Adapter	48	147053	Strain Relief	73	147170	Set Screw
22	73-6520	Air Line	49	147005	Motor Mount	74	146489	Rivet
23	73-6520	Hose 10 1/2"	50	73-6460	Transformer Mount	75	147212	Stand Pipe
24	147046	Fuel Filter	51	700218	Rivet	76	147167	Felt-wool
25	73-6520	Filter Hose	52	147054	Shorty Bushing	77	147065	Rivet
26	209351	Washer	53	154075	Cord Assembly	78	NA	Nut
27	147160	Adapter	54	154052	Relay			
28	147172	Snap Bushing	55	147229	Super Clip			

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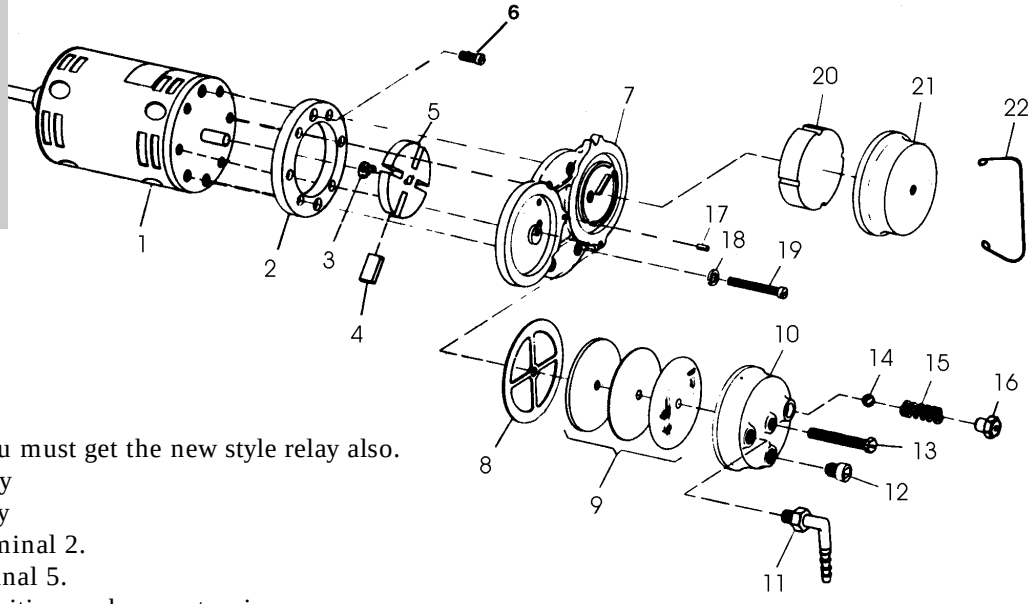
Replacement parts for Motor/Compressor Assembly
(Old Style)

Possible Brands
Champion, Redline
Century, Greenline
Stone, Ford
Jim Dandy



If you order a new motor, you must get the new style relay also.
154369 motor = 154039 relay
154341 motor = 154052 relay
Black motor wire goes to terminal 2.
Red motor wire goes to terminal 5.
The new relay is position sensitive, make sure top is up.

Key No.	Part No.	Description	BTU SIZES 40	60	94-97	150
1	154876	Motor (40)	X			
	154369	Motor (60-97,000)		X	X	
	154341	Motor (150)				X
2	147753	Body Ring 1/2"		X	X	
	147003	Body Ring 5/8"	X			X
3	73-6430	Insert	X	X	X	X
4	154616	Vane 5/8"	X			X
	154598	Vane 1/2"		X	X	
5	147757	Rotor 1/2"		X	X	
	73-6420	Rotor 5/8"	X			X
6	FHPF3-5C	1/2” Screw		X	X	
	FHPF3-6C	5/8” Screw	X			X
7	154601	Cover Plate	X	X	X	X
8	147693	Gasket	X	X	X	X
9	154467	Filter	X	X	X	X
10	147837	Filter Body	X	X	X	X
11	147014	Elbow	X	X	X	X
12	147009	Plug	X	X	X	X
13	147814	Screw	X	X	X	X
14	147022	Ball	X	X	X	X
15	147021	Spring	X	X	X	X
16	147010	Adjusting Screw	X	X	X	X
17	147778	Pin	X	X	X	X
18	70641	Washer	X	X	X	X
19	148394	Screw	X	X	X	X
20	147790	Filter	X	X	X	X
21	147731	Cover	X	X	X	X
22	147779	Retaining Wire	X	X	X	X

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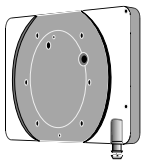
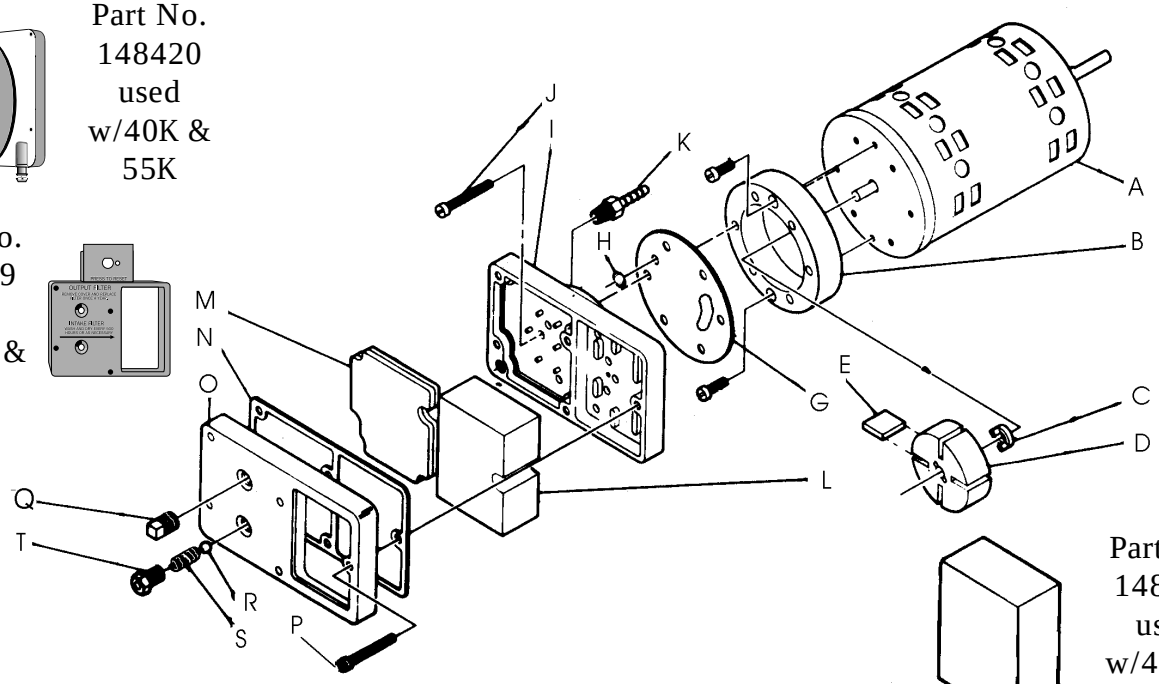
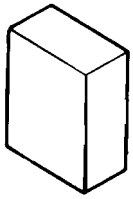
Motor/Compressor Assembly (New Style)



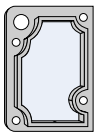
Part No. 148420 used w/40K & 55K

Part No. 148419 used w/40K & 55K





Part No. 148442 used w/40K & 55K



Part No. 154822-Kit used w/40K & 55K

Key No.	Part No.	Description	BTU SIZES 40	55	75	94-97	100	150/220
A	154367	Motor	X	X				
	154369	Motor			X	X	X	
	154341	Motor						X
B	147753	Body Ring 1/2"			X	X		
	147003	Body Ring 5/8"	X	X			X	X
C	73-6430	Insert	X	X	X	X	X	X
D	147757	Rotor 1/2"			X	X		
	73-6420	Rotor 5/8"	X	X			X	X
E	154616	Vane (set of 4) 5/8"	X	X			X	X
	154598	Vane (set of 4) 1/2"			X	X		
G	154797	Backing Plate	X	X	X	X	X	X
H	73-6440	O Ring	X	X	X	X	X	X
I	148234	Filter Housing	X		X	X	X	X
	148420	Filter Housing		X				
J	148394	Screw	X	X	X	X	X	X
K	147052	Adapter	X	X	X	X	X	X
L	147019	Input Filter	X	X	X	X	X	X
M	154003	Output Filter	X		X	X	X	X
	154822	Output Filter		X				
N	147012	Gasket	X	X	X	X	X	X
O	148115	Filter Cover	X	X	X	X	X	X
	148419	Filter Cover	X	X				
P	148233	Screw	X	X	X	X	X	X
Q	147009	Plug	X	X	X	X	X	X
R	147022	Ball	X	X	X	X	X	X
S	147021	Spring	X	X	X	X	X	X
T	147010	Adjusting Screw	X	X	X	X	X	X

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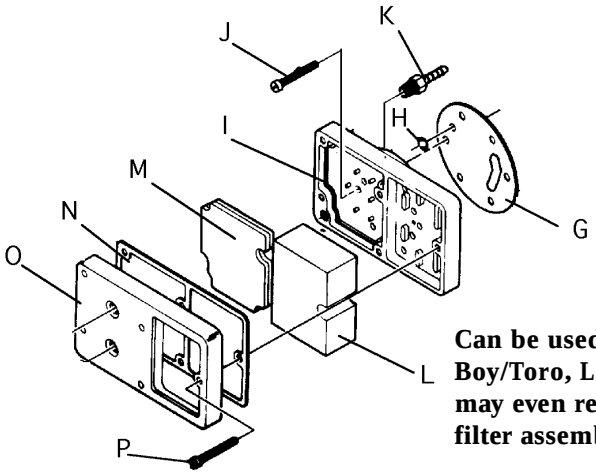
Toro/Porta Heat Filter Assembly

Other brands:
Champion, Gilson, Redline, Green Line, Arctic Flame,

Filter Assembly Kit No. 154354
Kit includes:

Key No.	Part No.	Description
G	154797	1 Backing Plate
H	73-6440	1 O-Ring
I	148234	1 Filter Housing
J	148394	6 Screw
K	147052	1 Adapter
L	147019	1 Input Filter
M	154003	1 Output Filter
N	147012	1 Gasket
O	148115	1 Filter Cover
P	148233	5 Screw



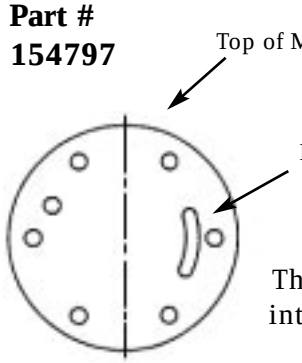
Can be used on most Lawn Boy/Toro, Low Pressure heaters. It may even replace the older style filter assembly

Tune Up Kit Part No. 154891
Kit includes:

1	147080	Spark Plug
1	147082	Nozzle O Ring
1	147012	Gasket
1	147019	Input Filter
1	154003	Output Filter

Position of new backing plate.

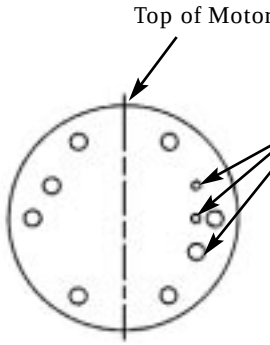
Part # 154797



Use w/backing plate #148234

These 2 are not interchangeable

Position of old backing plate.

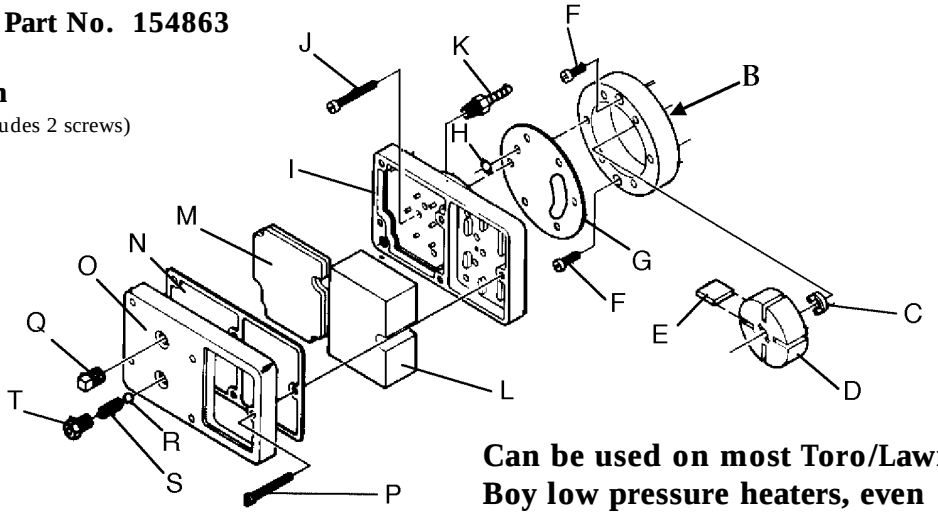


Part # 6832NR

Use w/backing plate #6836NR

Complete Compressor Assembly Part No. 154863

Key No.	Part No.		Description
B	147753	1	Body Ring (includes 2 screws)
C	73-6430	1	Insert
D	147757	1	Rotor
E	154598	4	Vane
G	154797	1	Backing Plate
H	73-6440	1	O Ring
I	154710	1	Filter Housing
J	148394	6	Screw
K	147052	1	Adapter
L	147019	1	Input Filter
M	154003	1	Output Filter
N	147012	1	Gasket
O	148115	1	Filter Cover
P	148233	5	Screw
Q	147009	1	Plug
R	147022	1	Ball
S	147021	1	Spring
T	147010	1	Adjusting Screw



Can be used on most Toro/Lawn Boy low pressure heaters, even the older style.

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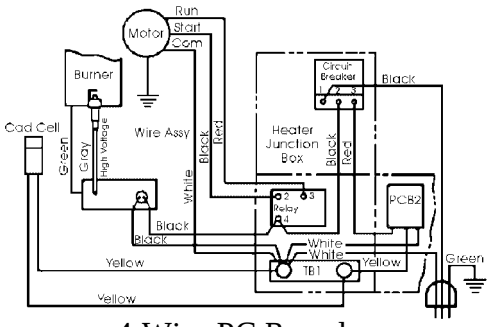
Service Information for the following brands:
Champion, Porta Heat, Red Line, Century, Lawn Boy, Arctic Flame, Stones

3 Wire to 4 Wire PC Board Conversion on 60, 97, 150 Inline Low Pressure Heaters

Disconnect the heater from any power source.

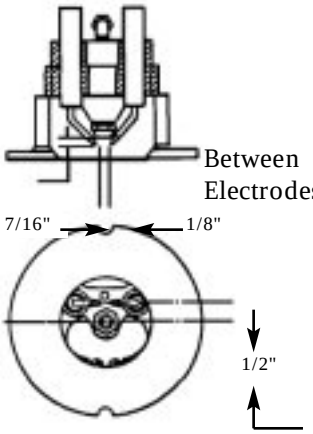
1. After removing the detective PC Board install the new 4 wire PC Board in its appropriate location
2. Connect the white wire and yellow wire of he new PC Board to the same location as the white and yellow wire of the 3 wire PC Board
3. Connect the red wire of the PC Board to the #4 terminal of the relay.
4. Connect the blue wire of the PC Board to the #2 terminal of the circuit breaker.
5. Test the heater and attach the wiring diagram on appropriate location



4 Wire PC Board Wiring Diagram

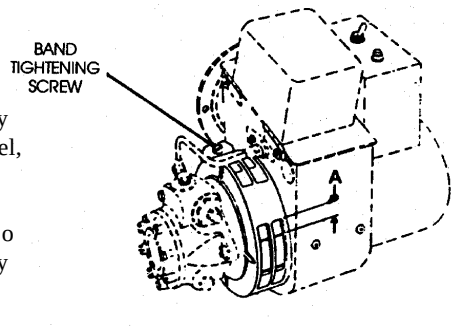
Electrode Setting for M3981
Brands included: Master, Knipco, Reddy, Koehring

NOTE: The settings shown are for most conditions of fuel, humidity and temperature. You may find it necessary to increase the 1/8 inch setting to 3/16, in order to achieve good ignition and burning. The 1/2 inch dimension must be kept.



AIR BAND ADJUSTMENT

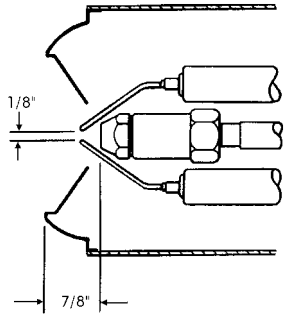
Air band setting may vary slightly depending on fuel, climate and altitude. If your heater operates properly, you will have no reason to alter the factory setting. To set the air band, with the heater running, close the air band until only an occasional flicker is observed.



APPROXIMATE FACTORY SETTINGS

Unit	Dimension "A"
1725 RPM Burner	
120,000 BTU	5/8"
155,000 BTU	1-13/16"
230,000 BTU	1-1/2"
***3450 RPM Burner**	
155,000 BTU	1-5/16"
230,000 BTU	1-1/2"

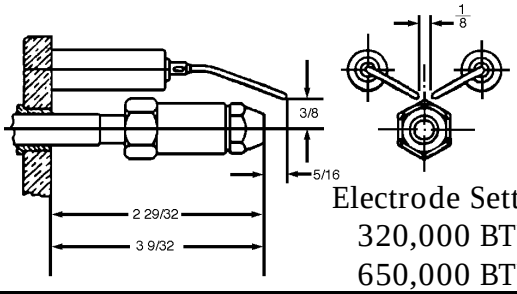
*High Speed Burner



Electrode Setting
Air Scoop Heater

ELECTRODE SETTINGS

Check electrodes for proper adjustment. The spark gap should be 1/8" (not to exceed 3/16") as shown. They should be 1/8" ahead of the nozzle face and 1/2" above the center of the nozzle. The relation of the electrodes to the nozzle and to the front end of the air cone is important.



Electrode Setting
320,000 BTU
650,000 BTU

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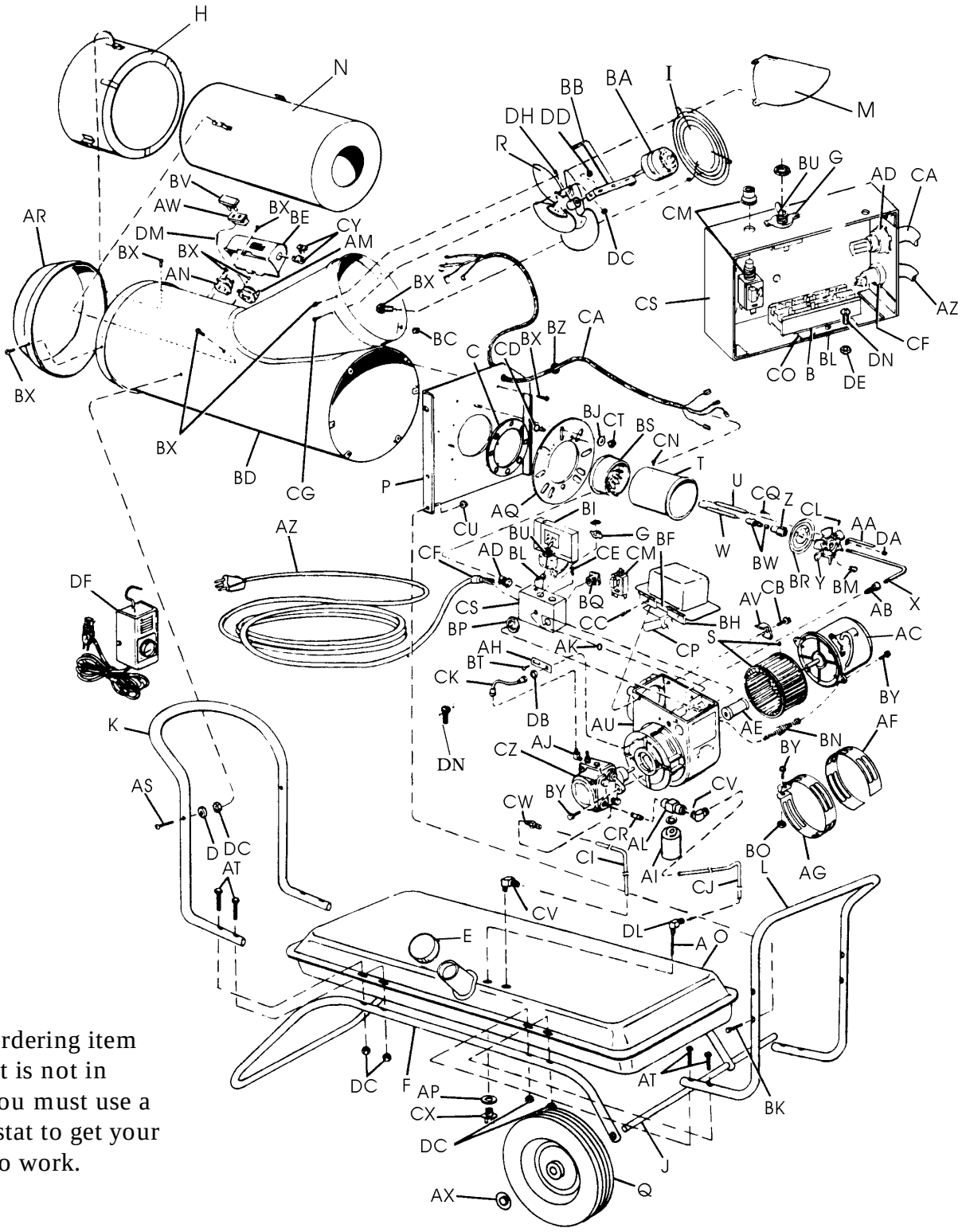
120-155-230,000 BTU Forced Air "Old Style" Air Scoop Heater



When ordering item #BV, if it is not in stock, you must use a thermostat to get your heater to work.

See page 21 for electrode setting.
See page 95 for wiring diagram.
See page 21 for air band adjustments.

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Forced Air "Old Style" Air Scoop Heater Parts Listing

Ref No.	New Part#	Description	120 BTU	155 BTU	230 BTU
A	154384	Lift Tube Assembly		1	
	154470	Lift Tube Assembly	1		
	147463	Lift Tube Assembly			1
B	147270	Terminal Block			1
C	147782	Burner Mounting Gasket	1	1	1
D	147697	Asbestos Washer		2	2
E	154021	Filler Cap	1	1	1
F	147228	Tank Support	1	1	1
G	147329	Switch Plate	1	1	1
H	154415	Radiation Shield	1		
	154847	Radiation Shield		1	
	154844	Radiation Shield			1
I	147207	Air Intake Grille		1	
	154205	Air Intake Grille			1
	154433	Air Intake Grille	1		
J	147257	Axle		1	1
	147803	Axle	1		
K	147210	Front Handle		1	
	221499	Front Handle	1		
	147462	Front Handle			1
L	147208	Rear Handle	1	1	
	147461	Rear Handle			1
M	147209	Air Intake Cover		1	
	148626	Air Intake Cover			1
	154070	Air Intake Cover	1		
N	154081	Combustion Chamber		1	
	154204	Combustion Chamber			1
	154416	Combustion Chamber	1		
O	154083	Fuel Tank		1	
	154207	Fuel Tank			1
	221484	Fuel Tank	1		
P	154082	Burner Support		1	
	154208	Burner Support			1
	221509	Burner Support	1		
Q	154061	Wheel		2	2
	154062	Wheel	2		
R	154116	Fan		1	
	154214	Fan			1
	154432	Fan	1		
S	154587	Burner Fan, 1725 RPM	1	1	1
	147625	Burner Fan, 3450 RPM	1	1	1
T	222604	Air Tube	1	1	1
U	154273	Electrode R.H.	1	1	1
W	154274	Electrode L.H.	1	1	1
X	147909	Oil Line Tube	1	1	1
Y	154589	Air Stabilizer	1	1	1
Z	147914	Air Stabilizer	1	1	1
AA	154576	Electrode Buss Bar	2	2	2
AB	147913	Oil Line Fitting	1	1	1
AC	154586	Burner Motor, 1725 RPM	1	1	1
	154279	Burner Motor, 3450 RPM	1	1	1
AD	147326	Connector 1/2"	1	1	1
AE	147893	Coupling	1	1	1
AF	147903	Inner Air Band	1	1	1
AG	147902	Outside Adj. Air Band	1	1	1
AH	147901	Oil Line Slot Cover	1	1	1
*AI	147236	Fuel Filter	1	1	1
AK	71040	Washer INT Tooth 1/4"	1	1	1
AJ	147892	Oil Line Elbow	1	1	1
*AL	154295	Filter Head	1	1	1
AM	154102	High Limit Switch	1	1	1
AN	154103	Fan Motor Switch	1	1	1
AP	147707	Drain Gasket	1	1	1
AQ	147900	Burner Support Flange	1	1	1
AR	147206	End Ring		1	
	73-6500	End Ring			1
	147759	End Ring	1		
AS	147333	Screw 10-24 x 1-1/4M	2		
AT	147820	Screw 10-24 x 2-1/4M	8	10	8
AU	221185	Fan Housing	1	1	1
AV	221352	Transformer Hold Clip	1	1	1
AW	154070	Therm. Jumper Outlet	2	2	2
AX	154902	Push Nut	2	2	2
AZ	154423	Power Cord	1	1	1

Ref No.	New Part#	Description	120 BTU	155 BTU	230 BTU
BA	154108	Fan Motor		1	
	154213	Fan Motor			1
	154414	Fan Motor	1		
BB	154006	Fan Motor Support		1	
	154215	Fan Motor Support			1
	154477	Fan Motor Support	1		
BC	220219	Fan Motor Leads Bushing	1	1	1
BD	154288	Outer Housing		1	
	154289	Outer Housing			1
	221551	Outer Housing	1		
BE	147203	Fan/Limit Switch Cover	1	1	1
BF	147701	Cell Mounting Bracket	1	1	1
BH	154588	Transformer	1	1	1
BI	147335	Cover & Label Assembly	1	1	1
BJ	70701	Flatwasher 5/16"	3	3	3
BK	70104	Capscrew 1/4-20 x 1-1/4	4	4	4
BL	147164	Screw 6-32 x 3/16	3	3	3
BM	147912	Insulator Bushing	2	2	2
BN	147899	Burner Motor Cord Cover	1	1	1
BO	147898	Air Band Nut	1	1	1
BP	220267	Conduit Locknut 1/2"	1	1	1
BQ	147689	Conduit Nipple 1/2"	1	1	1
BR	222605	Baffle Plate 3"	1	1	
	222606	Baffle Plate 2-1/2"			1
BS	222607	Air Cone 2"	1	1	
	147896	Air Cone 2-1/4"			1
BT	147533	Screw 10-24 x 3/8	1	1	1
BU	154155	Switch	1	1	1
BV	147195	Thermostat Jumper Plug	1	1	1
BW	154389	Nozzle .85 x 80˚	1		
	154387	Nozzle 1.10 x 80˚		1	
	154388	Nozzle 1.65 x 60˚			1
	See Nozzle Chart on page 229				
BX	147024	Screw 8 x 1/2 AB	21	25	24
BY	70484	Screw 5/16-18 x 1	5	5	5
BZ	147192	Wire Bushing	1	1	1
CA	154109	Wire Assembly	1	1	
	154111	Wire Assembly			1
CB	220108	Screw 5/16-18 x 3/4	1	1	1
CC	700057	Screw 5/16-18 x 1/2	2	2	2
CD	221373	Screw 5/16-18 x 3/4 FL	3	3	3
CE	220268	Screw 10-32 x 1/2	1	1	1
CF	147053	Strain Relief	1	1	1
CG	147815	Screw 10-24 x 1/2RD	3	3	4
CI	227637	Return Line Tube	1	1	1
CJ	147732	Suction Line Tube	1	1	1
CK	221370	Fuel Line	1	1	1
CM	154362	Circuit Breaker & PC Brd	1	1	1
	154361	Printed Circuit Board	1	1	1
	154012	Circuit Breaker	1	1	1
CN	222635	Screw 10-32 x 3/8	2	2	2
CO	147327	Terminal Block Bracket	1	1	1
CP	13666	Cad Cell	1	1	1
CQ	147908	Screw 4-40 x 5/16	1	1	1
CR	147182	Nipple 1/4 NPT Close	1	1	1
CS	147762	Junction Box	1	1	1
CT	70549	Hex Keps Nut 5/16-18	3	3	3
CU	147004	Hex Keps Nut 1/4-20	4	4	4
CV	147373	Elbow 1/4NPT x 1/4 CC	2	2	2
CW	154239	Fitting 1/4NPT x 1/4CC	1	1	1
CX	154796	Drain Plug	1	1	1
CY	147196	Strain Relief	1	1	1
CZ	154180	Pump, 1725 RPM 7000 Series	1	1	1
	154276	Pump, 3450 RPM 7000 Series	1	1	1
DA	221357	Palnut 5-40	2	2	2
DB	220143	Hex Jam Nut 7 16-29	1	1	1
DC	147158	Keps Nut 10-24	13	13	13
DD	71133	Keps Nut 8-32		2	
DF	KT121	Thermostat	(Optional)		
DM	154067	Wire Assembly	1	1	1
DN	147016	Screw	1	1	1

*Can be purchased as an assembly, part #154521

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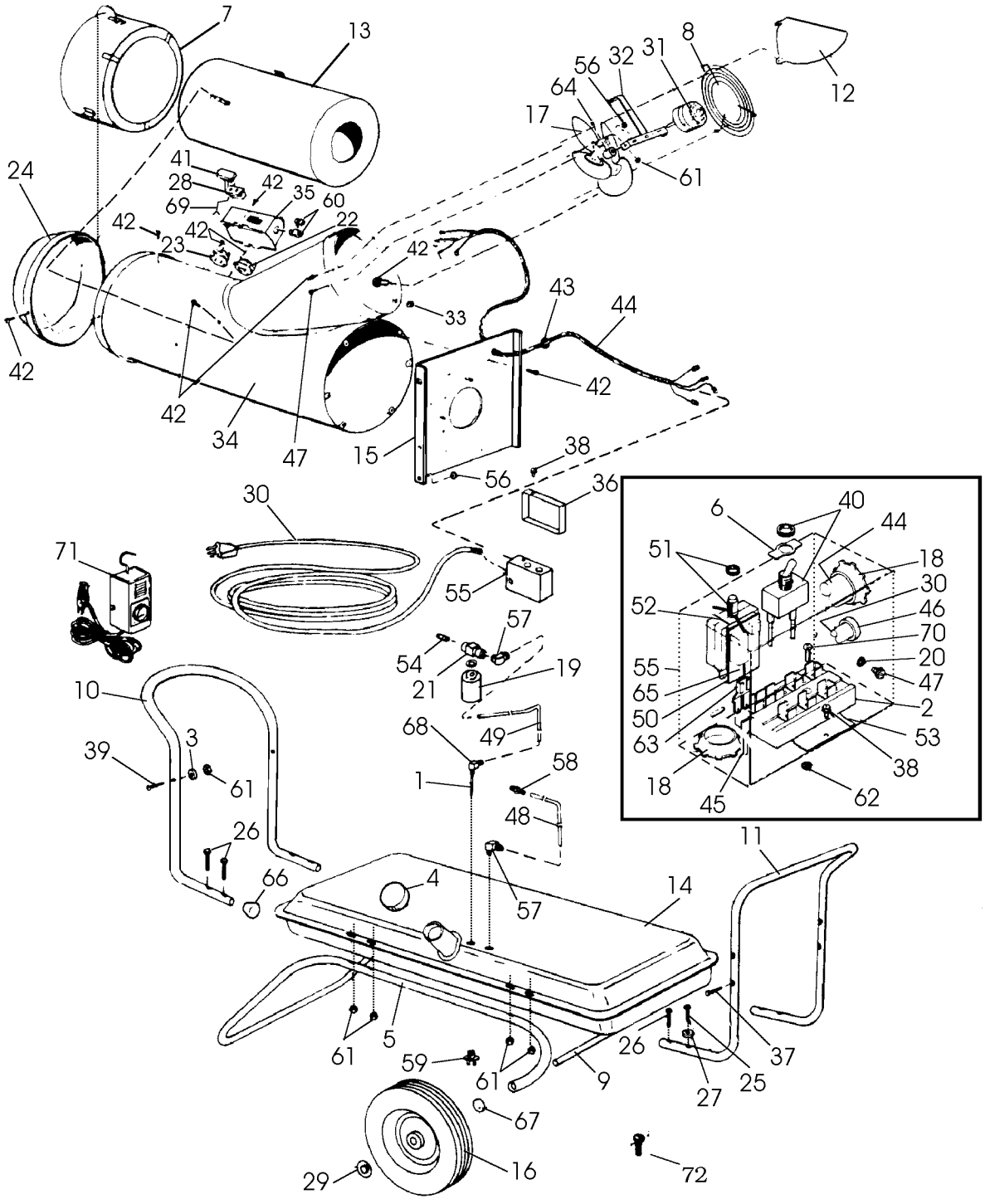
155-230,000 BTU Forced Air"New Style" Air Scoop Heater



See page 96 for burner assy part numbers.
See page 21 for electrode setting.
See page 21 for air band adjustments.

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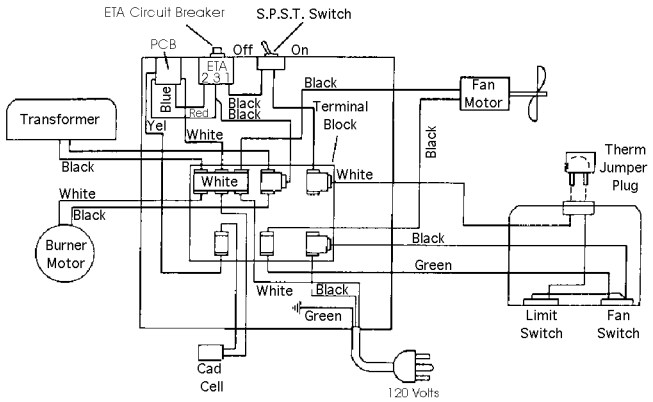
"New Style" Air Scoop Heater Parts Listing

Key No.	Part No.	Description	155,000 BTU	230,000 BTU
1	NLA	Lift Tube	X	
	147463	Lift Tube		X
2	147270	Terminal Block	X	X
3	147181	Spacer	X	X
4	154021	Fuel Cap with gasket	X	X
5	147228	Tank Support	X	X
6	147329	Switch Plate	X	X
7	154847	Radiation Shield	X	
7	154844	Radiation Shield		X
8	147207	Intake Grille	X	
	154205	Intake Grille		X
9	147257	Axle	X	X
10	147210	Front Handle	X	
	147462	Front Handle		X
11	147208	Rear Handle	X	
	147461	Rear Handle		X
12	148624	Air Intake Cover	X	
	148626	Air Intake Cover		X
13	154204	Combustion Chamber		X
	154081	Combustion Chamber	X	
14	154083	Fuel Tank	X	
	154207	Fuel Tank		X
15	154913	Burner Support	X	
	154208	Burner Support		X
16	154061	Air Scoop Wheel	X	X
17	154116	Fan 155	X	
	154214	Fan 230		X
18	147326	Romex Connector	X	X
19	147236	Filter Cartridge	X	X
20	147334	Lock Washer	X	X
21	154295	Filter Head	X	X
22	154594	Limit Switch	X	X
23	154472	Limit Switch	X	X
24	147206	End Ring	X	
	73-6500	End Ring		X
25	147333*	Screw	X	X
26	147771*	Screw	X	X
27	70682	Washer	X	X
28	154070	2 Prong Outlet	X	X
29	147157	Push Nut	X	X
30	154423	Cord	X	X
31	154108	Motor 155	X	
	154213	Motor 230		X
32	154114	Motor Support	X	
	154215	Motor Support		X
33	700156	Bushing	X	X
34	154915	Housing Assembly	X	
	154289	Housing Assembly		X
35	154288	Limit Switch Cover	X	X
36	154283	Junction Box Cover	X	X
37	146366*	Screw	X	X
38	147164	Screw	X	X
39	71121	Screw	X	X
40	154155	On-Off Switch	X	X
41	147195	Jumper Plug	X	X
42	147024	Screw	X	X
43	147192	Snap Bushing	X	X
44	154109	Wire	X	
	154111	Wire		X
45	154113	Wire	X	X
46	147053	Strain Relief	X	X
47	147000	Screw	X	X
48	73-6520	Return Hose	X	X
49	73-6520	Suction Hose	X	X
50	154361	Circuit Board	X	X
51	154012	Circuit Breaker	X	X
52	147197	Mounting Tape	X	X
53	147327	Bracket	X	X
54	147182	Nipple	X	X
55	154284	Junction Box	X	X
56	147004*	Nut	X	X
57	147183	Nylon Elbow	X	X
58	147184	Nylon Fitting	X	X
59	154796	Drain Plug	X	X
60	147196	Strain Relief	X	X
61	147158*	Nut	X	X
62	147324*	Nut	X	X
63	147171	Terminal	X	X
64	70496	Set Screw	X	X
65	147198	Cable Tie	X	X
66	147179	End Cap	X	X
67	700049	Flat Washer	X	X
68	154074	Fitting	X	X
69	154067	Wire	X	X
70	147016*	Screw	X	X
71	HA1210	Thermostat	X	X
72	NLA	Screw	X	X

* Common hardware may be purchased locally.

If you are ordering item #41 and we do not have it in stock you must use a thermostat to get your heater to work.

See page 98 for burner assembly part numbers.



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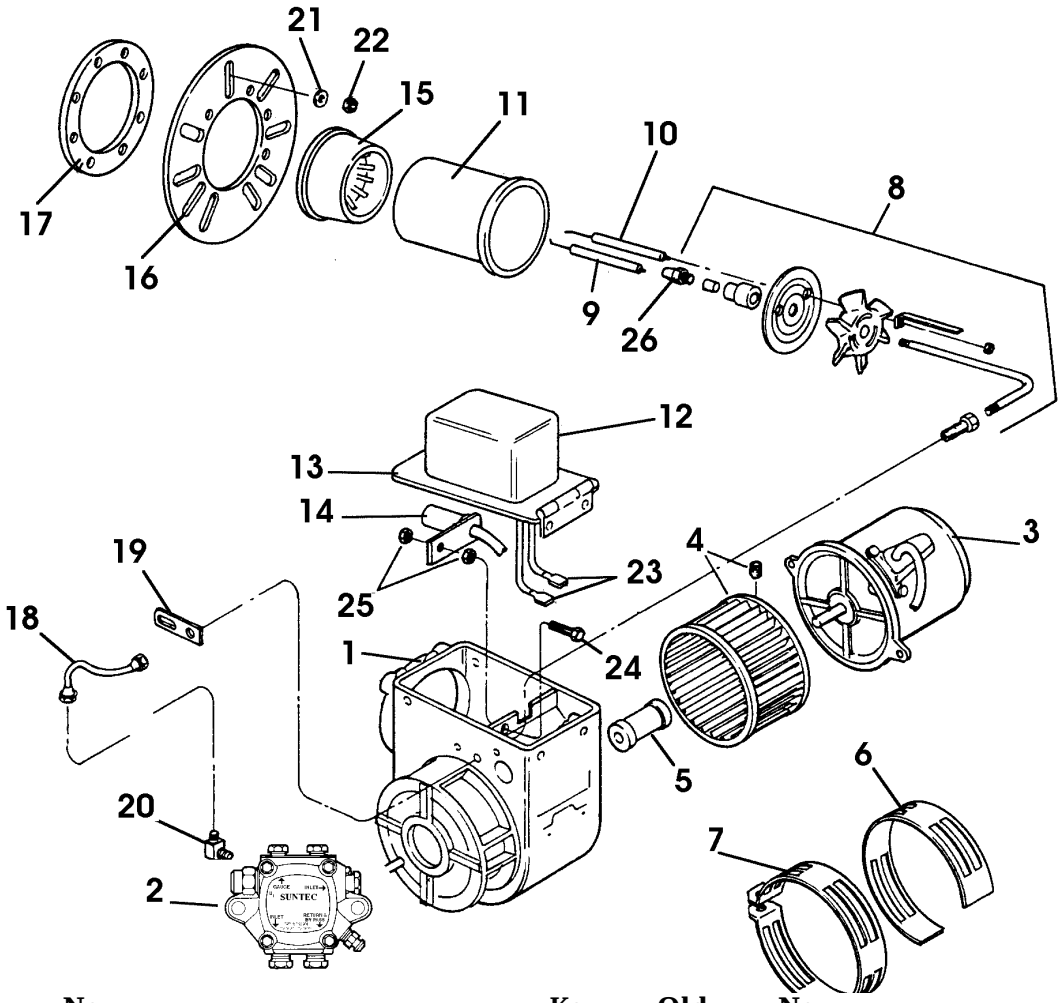
155,000 and 230,000 BTU Forced Air "New Style" Air Scoop Heater Burner Assembly Parts Listing



Key No.	Old Part No.	New Part No.	Description
1	240962	154275	Fan Housing
2		154180	Pump, 1725 RPM (7000 Series)
		154276	Pump, 3450 RPM (7000 Series)
3	240968	154279	Motor Assembly-Burner
4		154587	Burner Fan, 1725 RPM
	240961	147625	Burner Fan, 3450 RPM
5	240958	147624	Coupling Pump
6	240953	147619	Band Inner Air
7	240954	147620	Band Adjust. Air
8	240967	154278	Gun Assembly
9	240960	154273	Electrode Assembly L.H.
10	240959	154273	Electrode Assembly R.H.
11	240957	147623	Air Tube
12	240973	154282	Transformer
13	240963	147626	Fan Housing Cover
14	13666	13666	Cad Cell Assembly
15	240955	73-6540	Air Cone 2"
16	240969	154280	Burner Support Flange
17	240965	147627	Gasket Mounting
18	240970	154281	Fuel Line Assembly
19	240972	147629	Cover Oil Line Slot
20	240971	147628	Elbow Oil Line
21	70701	146205	*Washer 5/16 Flat
22	70549	146259	*Nut 5/16-18 Hd. Plated
23	220207	147527	Terminal Spade
24	220079	147000	Screw
25	222108	147701	Bracket-Cell Mount
26	222602	154387	Nozzle (155) 1.10 x 80˚
26	220304	154388	Nozzle (230) 1.65 x 65˚

* May be purchased at a hardware store.

Part #154210 is the complete burner assembly (except for nozzle). We do get these in stock at times, please call for availability.

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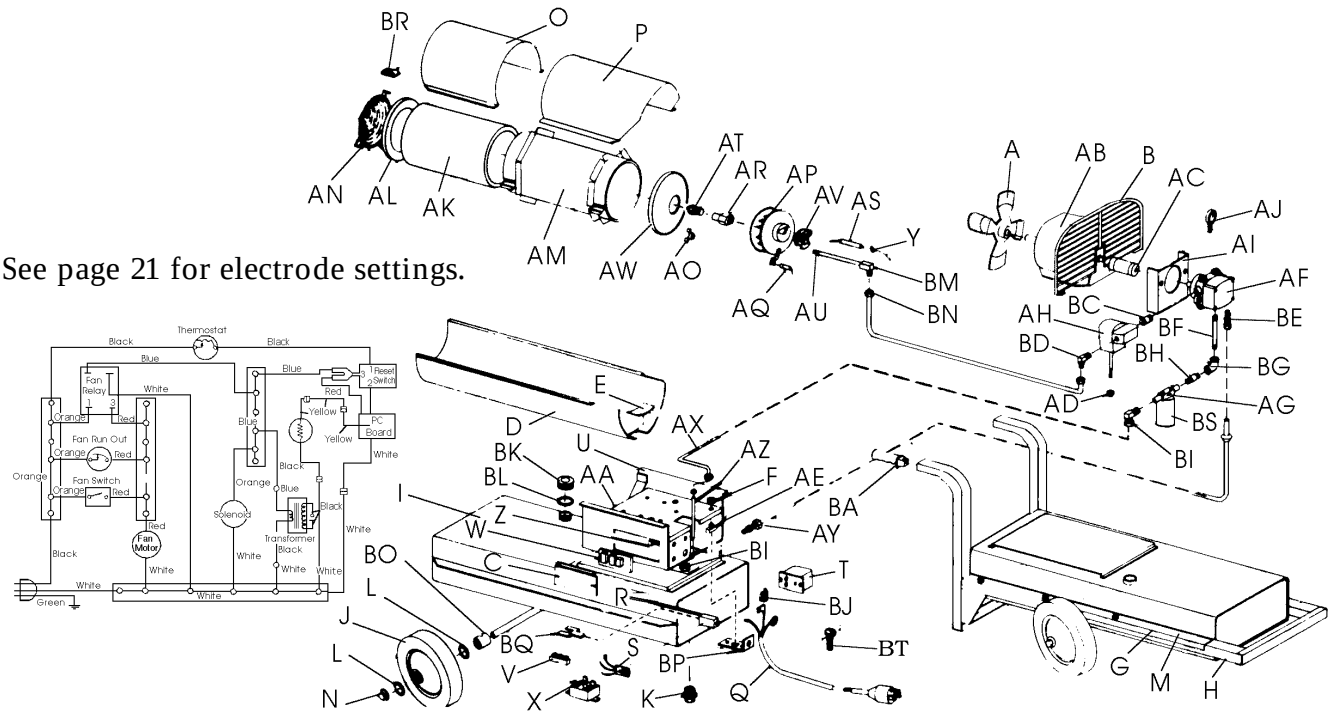
320,000 BTU Forced Air Heater Replacement Parts Listing

See page 21 for electrode settings.



Key No.	New Part No.	Description
A	154188	Fan 16"
B	154164	Grille
C	147378	Cover-Control Box
D	154919	Cover Assembly Lower
E	147364	Cover Plate
F	154160	Dial Assembly Thermostat
G	147386	Angle Tank Cover
H	154170	Cradle Assembly
I	154298	Tank & Decal Assembly
J	154921	Wheel
K	154796	Plug Drain
L		Washer, Flat SAE 5/8 Plated
M	700299	Screw
N	147157	Push Nut
O	154922	Upper Cover & Decal Assy
P	154300	Upper Cover & Decal Assy
Q	154224	Cord Assembly
R	154012	Circuit Breaker
S	154361	Printed Circuit Board Assy PCB-2
T	154770	Transformer Assy
U	154299	Yoke & Decal Assy
V	154154	Terminal Block
W	147394	Bracket Control Mount
X	154156	Relay
Y	154223	Wire Assembly-Ignition
Z	154155	Switch Fan
AA	154161	Motor Mount Assy
AB	154158	Motor 1/3 HP
AC	154162	Coupling
AD	147915	Bushing
AE	154088	Thermostat
AF	154180	Fuel Pump (100 psi)
AG	154295	Filter Head
AH	154347	Solenoid Valve Assy
AI	154163	Pump Bracket Assy
AJ	G14494	Gauge

Key No.	New Part No.	Description
AK	147359	Combustion Chamber Inner
AL	147430	End Chamber Front
AM	154178	Combustion Chamber Assy
AN	154174	Cone Assy
AO	154065	Therm-o-disc limit switch
AP	147436	Burner
AQ	154709	Cad Cell Assembly
AR	147375	Nozzle Adaptor
AS	154185	Electrode
AT	147377	Nozzle
AU	147397	Oil pipe
AV	147396	Oil line support
AW	154186	Combustion Chamber Assy Rear
AX	147385	Tube Suction
AY	147384	Tube Return
AZ	154236	Lift Tube Assy
BA	147416	Handle
BC	219983	Nipple
BD	147366	Elbow
BE	154239	Fitting
BF	147363	Nipple
BG	147369	Elbow
BH	147782	Nipple
BI	147373	Elbow
BJ	147053	Strain Relief
BK	154021	Fuel tank cap with gasket (2 1/2” threaded)
	154169	Fuel cap with tabs (2 1/2” threaded)
BL	148317	Gasket Fuel Cap
BM	147371	Elbow
BN	154217	Nozzle Tube Assy
BO	147356	Spacer Axle
BP	147391	Thermostat Bracket
BQ	147163	Terminal Adaptor
BR	147382	Clip Tinnerman
BS	147236	Fuel Filter spin on type
BT	N/A	Screw

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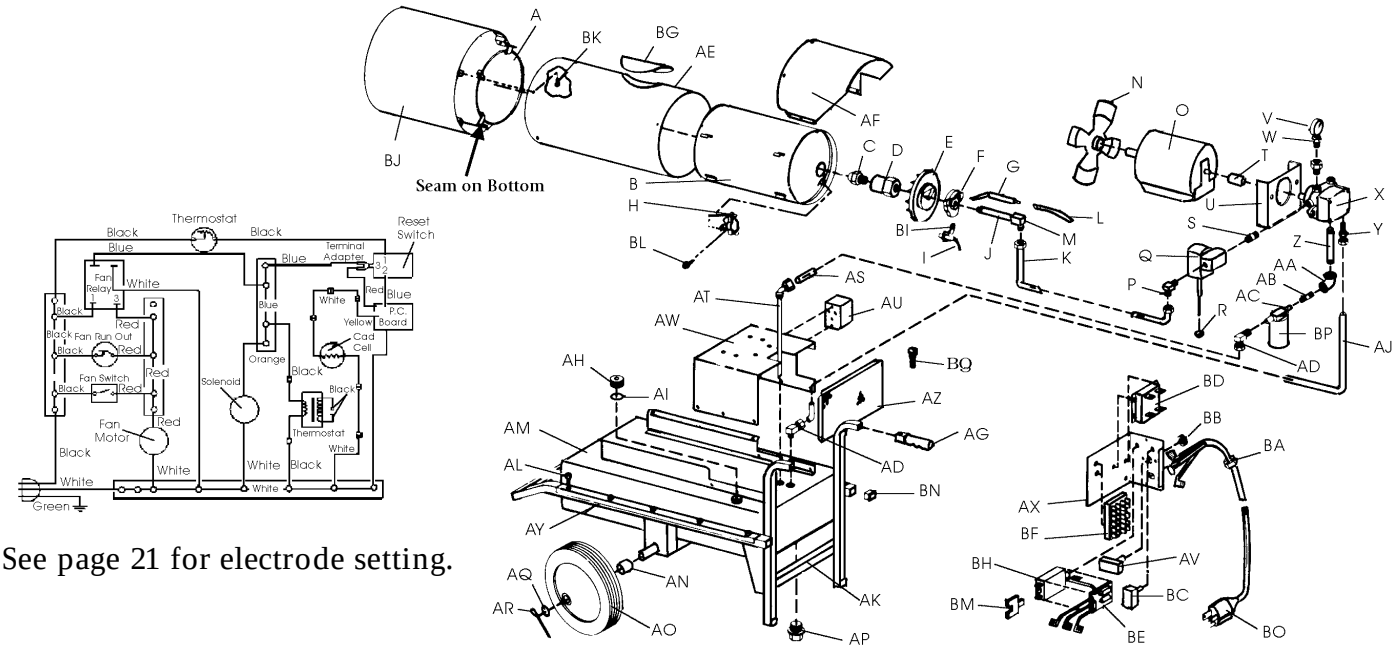
650,000 BTU Forced Air Heater Replacement Parts Listing



See page 21 for electrode setting.

Key No.	New Part No.	Description
A	154246	Restrictor Assembly
B	154843	Combustion Chamber Assy.
C	See page 229 for nozzle	
D	147375	Adapter Nozzle
E	147436	Burner
F	147396	Support Oil-Line
G	154185	Electrode
H	154065	Switch-Therm-O-Disc
I	154709	Cad Cell Assembly
J	147397	Pipe Oil
K	154263	Nozzle Tube Assembly
L	154261	Wire Assembly-Ignition
M	147371	Elbow-1/8 FNPT x 3/16 Flare
N	154260	Fan 20"
O	154248	Motor 3/4 H.P. 115V. 1725 RPM 60 HZ 1PH CCW
P	147366	Elbow-1/8 MNPT x 3/16 Flare
Q	154347	Solenoid Valve Assembly
R	147915	Bushing
S	219983	Nipple-1/8 NPT Short
T	154262	Coupling
U	154241	Pump Bracket Assembly
V	G14494	Gauge
W	147376	Adaptor-1/4 x 4"NPT
X	154180	Fuel Pump (100 psi)
Y	154239	Fitting
Z	147536	Nipple
AA	147369	Elbow
AB	147182	Nipple
AC	154295	Filter head
AD	147373	Elbow
AE	154293	Housing Assembly-Outer
AF	154925	Rear Cover & Decal Assy
AG	147416	Handle
AH	154021	Cap Fuel Tank with gasket
AI	148317	Fuel Cap Gasket

Key No.	New Part No.	Description
AJ	147567	Tube Return
AK	154268	Cradle Assembly
AL	700299	Screw
AM	154294	Tank Assembly-Fuel
AN	147564	Spacer
AO	154245	Wheel
AP	154796	Drain Plug
AQ	147543	Washer, Flat 3/4 Plated
AR	146370	Pin, Cotter 1/8 x 1" Plated
AS	147566	Suction Tube
AT	154238	Lift Tube Assembly
AU	154770	Transformer Assembly
AV	154088	Thermostat
AW	154266	Motor Support
AX	154290	Panel Control & Decal Assy
AY	147589	Angle Tank Cover
AZ	147563	Perforated Cover
BA	147053	Strain Relief
BB	154259	Dial Assembly-Thermostat
BC	154155	On/Off Switch
BD	154156	Relay
BE	154361	Printed Circuit Board Assembly
BF	154258	Terminal Block
BG	154292	Cover-Inspection & Decal Assy
BH	154012	Circuit Breaker w/ reset button
BI	147028	Bracket Flame Detector
BJ	154264	End Ring Assy
BK	147547	Screw
BL	147548	Screw
BM	147171	Terminal Adapter
BN	147572	Cap-End
BO	154224	Cord Assembly
BP	147236	Fuel FIlter spin on type
BQ	NLA	Screw

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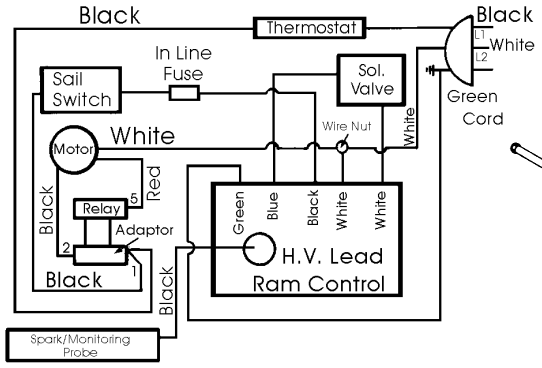
90-150,000 BTU Forced Air Toro Propane Heater

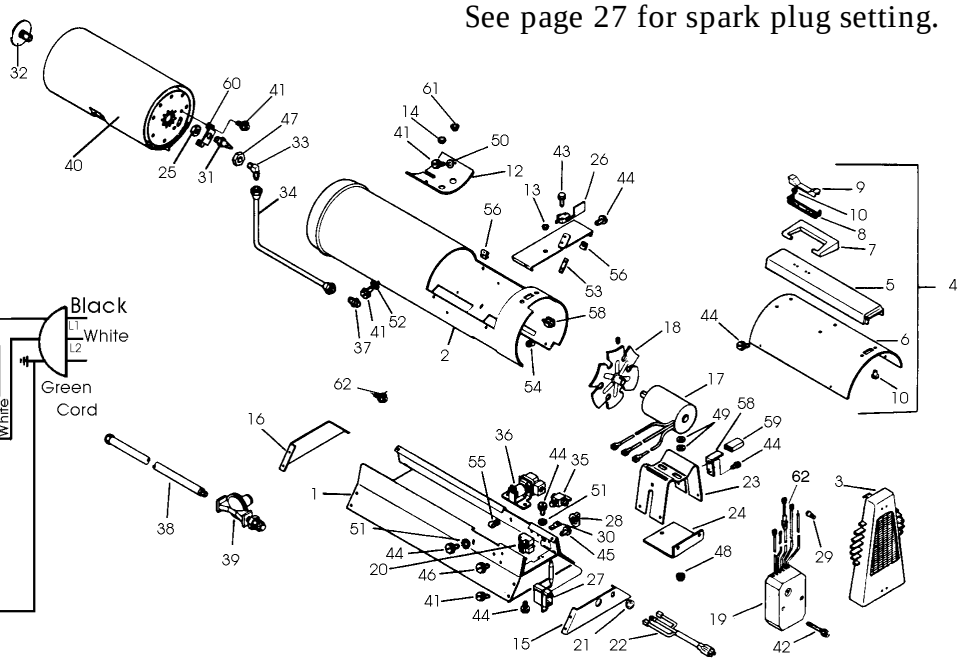
Model Numbers

50228A 50229A
50231A 50232A
50252A 50253A

See page 27 for spark plug setting.

Lawn Boy Propane Wiring Diagram





Key. No.	Part No.	Description
1	154864	Base Assembly
2	154905	Jacket & End Ring (90,000)
	154904	Jacket & End Ring (150,000)
3	73-7010	Grille Assembly
4	154898	Access Cover Assy
5	147061	Trim Channel
6	154397	Access Cover
7	147058	Handle
8	147060	Handle Base
9	233185	Base Cap
10	73-6470	Rivet
11	147637	Jacket Brace
12	147662	Insert
13	700156	Nylet Bushing
14	147054	Shorty Bushing
15	148514	Back Cover w/Decal
16	147658	Front Cover
17	154407	Motor w/Decal
18	154032	Fan 8" (90,000 BTU)
	154023	Fan 7 3/4" (150,000 BTU)
19	098884-01	Control Board
	154428	Control Board (Model W/O "A")
20	154039	Relay
21	147053	Strain Relief
22	154008	Cord Assembly
	154423	6 Ft Power Cord
23	147005	Motor Mount
24	147671	Control Board Support
25	147635	Nut, Jam
26	154306	Sail Switch
27	154305	Thermostat
28	154072	Thermostat Knob
29	147638	Nut-Wire
30	147171	Adaptor
31	147640	Spark Plug
	154429	Electrode (Model W/O "A")

Key. No.	Part No.	Description
32	154312	Nozzle Assy (90,000 BTU)
	154313	Nozzle Assy (150,000 BTU)
33	147646	Elbow Male
34	154865	Tube Assembly
35	154318	Gas Shut Off Valve
36	154314	Solenoid Valve
37	147649	Male Connector
38	154316	LP Gas Hose
39	154650	Regulator (90,000 BTU)
	154651	Regulator (150,000 BTU)
40	154304	Comb. Chamber (90,000)
	154327	Comb. Chamber (150,000)
41	147024	Screw
42	147183	Screw
43	147665	Screw
44	147000	Screw
45	147164	Screw
46	147118	Screw
47	147641	Jam Nut
48	147004	Nut
52	147041	Washer
53	147664	Nut plate
54	146489	Rivet
55	147650	Tinnerman Clip
56	147025	Tinnerman Clip
57	147229	Super Clip
58	147120	Jacket Brace
59	147002	Grip Brake Lock
60	147634	Support Sp.Plug
61	147172	Snap Bushing
62	154781	Wire assembly, RAM
63	*	Screw

* May be purchased locally.

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Pro Temp Oil Fired Heaters

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please call one of our technicians for assistance.

If you need technical assistance, feel free to call **Portable Heater Parts at 1-800-362-6951 or e-mail us at techservice@portableheaterparts.com**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Brand Names Include:
Pro Temp
Heat Hog

HEATER INDEX

BTU and Description	Fuel Type	Page No.
Features & Dimensions		103
45-215,000	Kerosene	104-105

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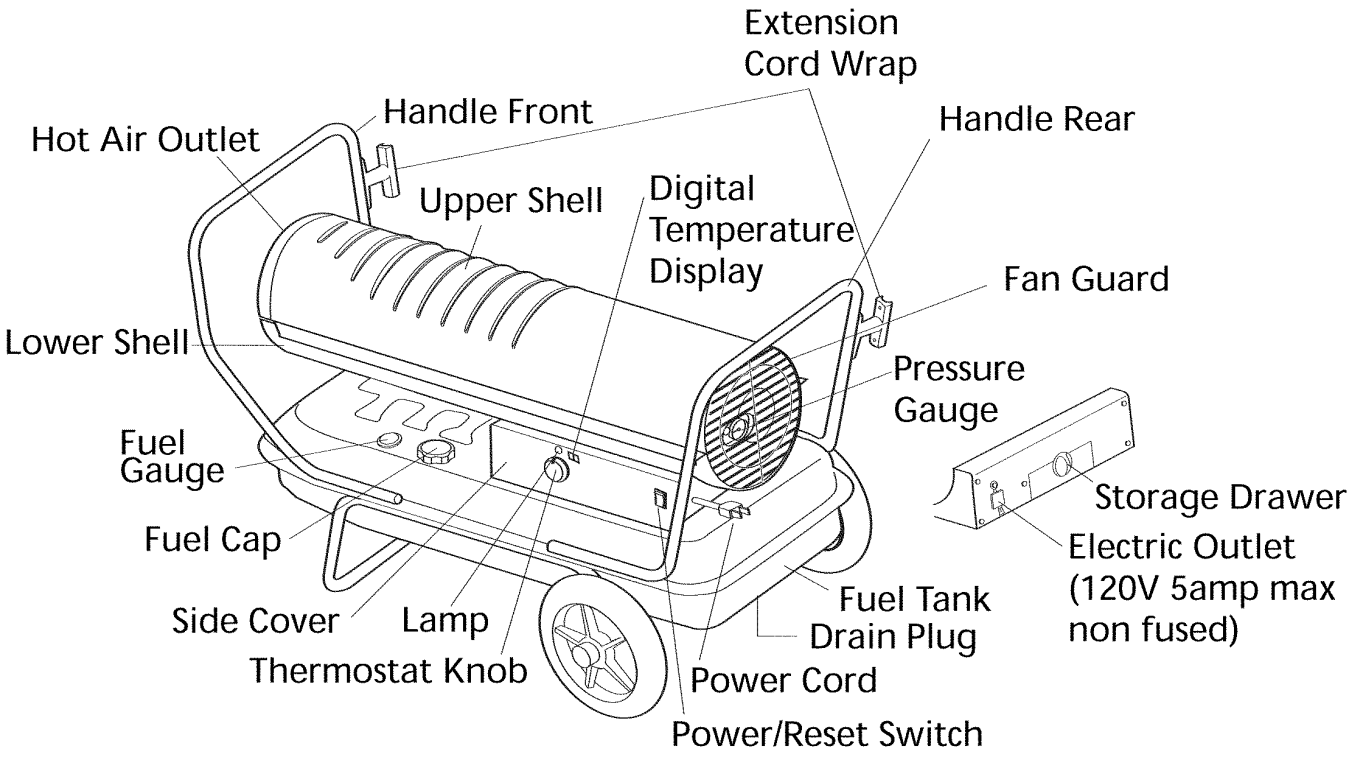
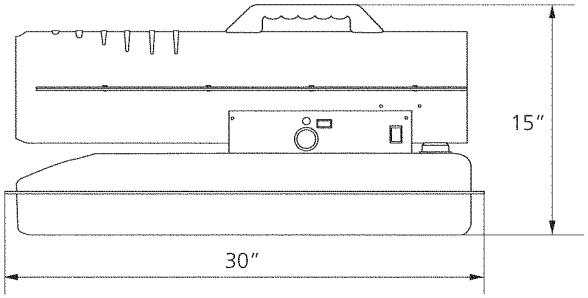
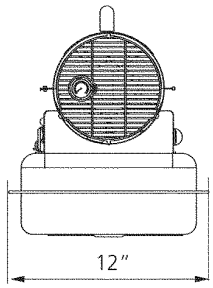
Forced Air Pro Temp Oil Fired Heater

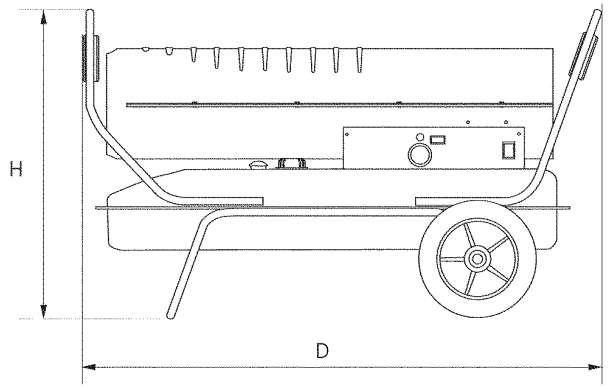


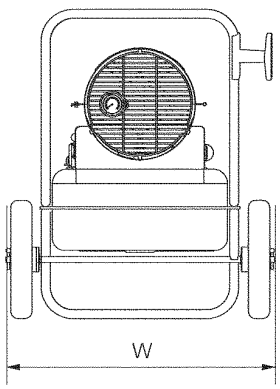




	PT 45/70T-KFA
H	15”
L	30”
W	12”

	PT 125T-KFA
H	25”
L	38”
W	22”





	PT 175T-KFA PT 215T-KFA
H	26”
L	43”
W	24”

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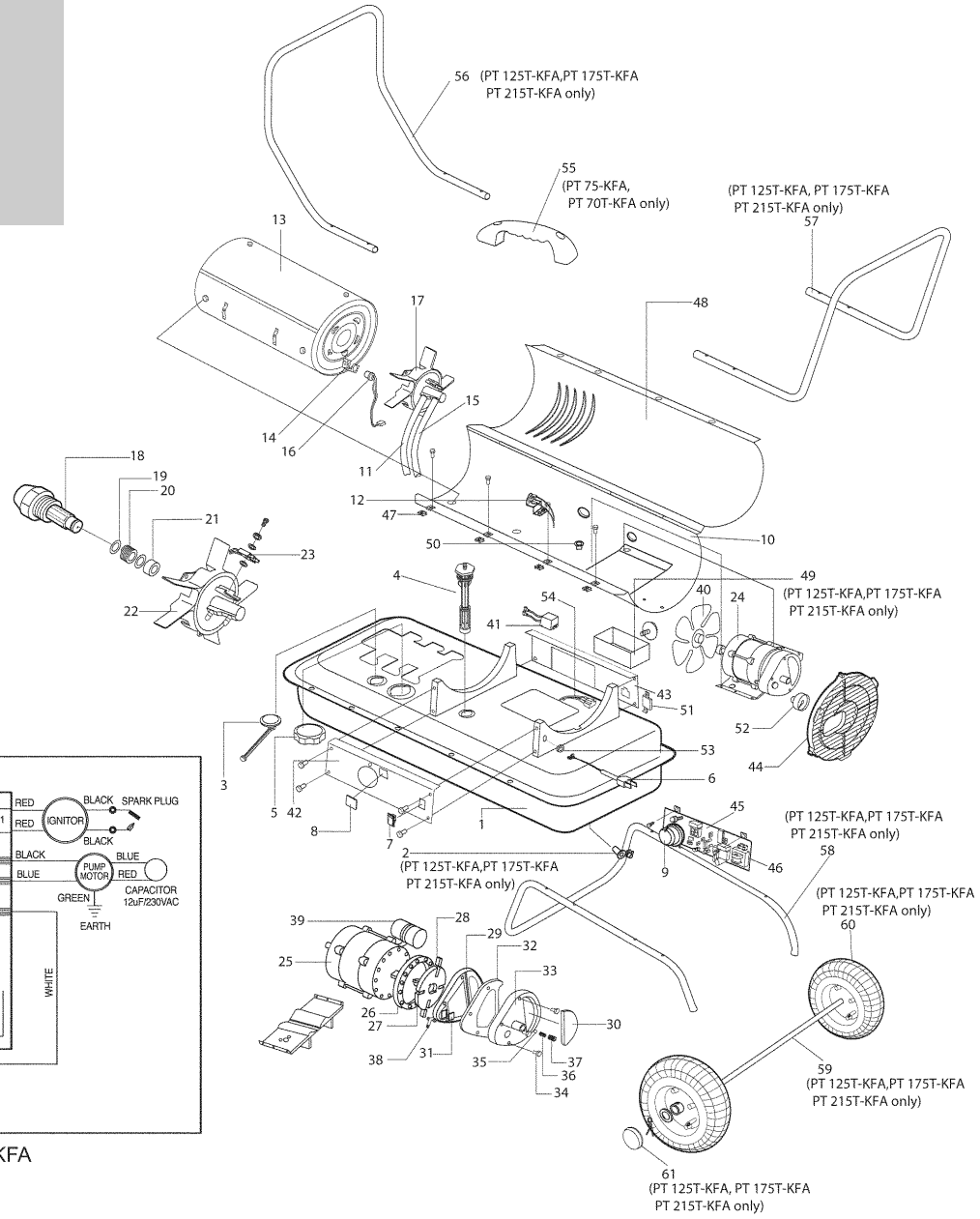
Forced Air Pro Temp Oil Fired Heater

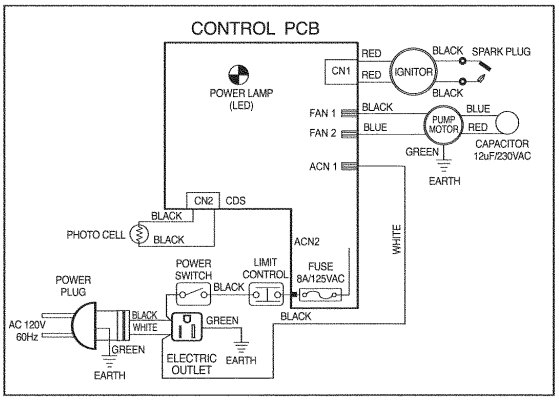
Model Numbers

PT45KFA PT70KFA

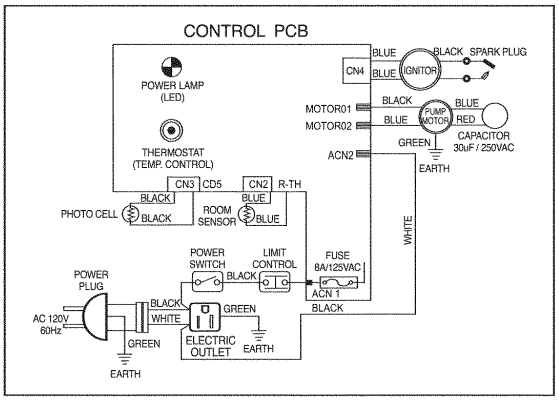
PT125KFA PT175KFA

PT215KFA

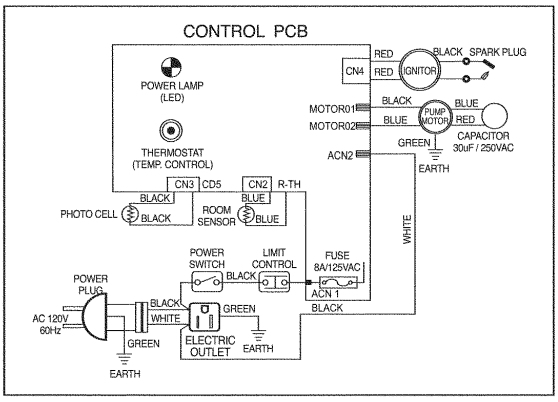




Wiring Diagram A Models PT 45-KFA



Wiring Diagram C Model PT 125/175/215T-KFA



Wiring Diagram B Models PT 70T-KFA

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Forced Air Pro Temp Oil Fired Heater

Key No.	Description	PT45KFA	PT70KFA	PT125KFA	PT175KFA	PT215KFA
1	Fuel Tank Assembly	70-002-0100	70-002-0100	70-002-0200	70-002-0300	70-002-0300
2	Drain Plug	-	-	70-002-0105	70-002-0105	70-002-0105
3	Fuel Gauge Assembly	70-007-0100	70-007-0100	70-007-0200	70-007-0200	70-007-0200
4	Fuel Filter Assembly	70-003-0100	70-003-0100	70-003-0200	70-003-0200	70-003-0200
5	Fuel Cap	70-006-0100	70-006-0100	70-006-0100	70-006-0100	70-006-0100
6	Power Cord	70-034-0100	70-034-0100	70-034-0200	70-034-0200	70-034-0200
7	Power Switch	70-038-0100	70-038-0100	70-038-0100	70-038-0100	70-038-0100
8	Window Display	-	-	70-040-0100	70-040-0100	70-040-0100
9	Thermostat Control Knob	-	70-031-0100	70-031-0100	70-031-0100	70-031-0100
10	Lower Shell	70-001-0102	70-001-0102	70-001-0202	70-002-0302	70-002-0402
11	Air Line	70-035-0100	70-035-0200	70-035-0300	70-035-0400	70-035-0500
12	Termostat Limit Control	70-019-0100	70-019-0100	70-019-0100	70-019-0100	70-019-0200
13	Combustion Chamber	70-010-0100	70-010-0200	70-010-0300	70-010-0400	70-010-0500
14	Photocell Bracket	70-010-0101	70-010-0101	70-010-0101	70-010-0101	70-010-0101
15	Fuel Line	70-036-0100	70-036-0200	70-036-0300	70-036-0400	70-036-0500
16	Photocell Assembly	70-016-0100	70-016-0100	70-016-0100	70-016-0100	70-016-0100
17	Burner Head Assembly	70-014-0100	70-014-0200	70-014-0300	70-014-0400	70-014-0500
18	Nozzle	70-015-0100	70-015-0200	70-015-0300	70-015-0400	70-015-0500
19	Nozzle Seal Washer	70-015-0101	70-015-0101	70-015-0101	70-015-0101	70-015-0101
20	Nozzle Seal Spring	70-015-0102	70-015-0102	70-015-0102	70-015-0102	70-015-0102
21	Nozzle Sleeve	70-015-0103	70-015-0103	70-015-0103	70-015-0103	70-015-0103
22	Burner Head	70-014-0101	70-014-0101	70-014-0301	70-014-0401	70-014-0401
23	Spak Plug	70-052-0100	70-052-0100	70-052-0200	70-052-0200	70-052-0200
24	Motor and Pump Assembly	70-020-0100	70-020-0100	70-020-0300	70-020-0400	70-020-0500
25	Motor	70-021-0100	70-021-0100	70-021-0200	70-021-0300	70-021-0400
26	Pump Body	70-020-0101	70-020-0101	70-020-0101	70-020-0101	70-020-0401
27	Rotor Kit	70-022-0100	70-022-0100	70-022-0100	70-022-0100	70-022-0200
28	Blade	70-022-0102	70-022-0102	70-022-0102	70-022-0102	70-022-0202
29	End Pump Cover	70-020-0102	70-020-0102	70-020-0102	70-020-0102	70-020-0102
30	Filter Kit	70-054-0100	70-054-0100	70-054-0100	70-054-0100	70-054-0100
31	Lint Filter	70-054-0102	70-054-0102	70-054-0102	70-054-0102	70-054-0102
32	Output Filter	70-023-0100	70-023-0100	70-023-0100	70-023-0100	70-023-0100
33	End Filter Cover	70-020-0103	70-020-0103	70-020-0103	70-020-0103	70-020-0103
34	Plug/Pump Adj.Kit	70-055-0100	70-055-0100	70-055-0100	70-055-0100	70-055-0100
35	Ball	70-020-0104	70-020-0104	70-020-0104	70-020-0104	70-020-0104
36	Spring	70-020-0105	70-020-0105	70-020-0105	70-020-0105	70-020-0105
37	Adjust Screw	70-020-0106	70-020-0106	70-020-0106	70-020-0106	70-020-0106
38	Nipple	70-014-0104	70-014-0104	70-014-0104	70-014-0104	70-014-0104
39	Capacitor	70-020-0107	70-020-0107	70-020-0201	70-020-0201	70-020-0201
40	Fan Assembly	70-024-0100	70-024-0200	70-024-0300	70-024-0400	70-024-0400
41	Ignitor	70-037-0100	70-037-0200	70-037-0300	70-037-0400	70-037-0500
42	Right Side Cover	70-008-0100	70-008-0200	70-008-0300	70-008-0400	70-008-0400
43	Left Side Cover	70-009-0100	70-009-0100	70-009-0200	70-009-0300	70-009-0300
44	Fan Guard	70-016-0100	70-016-0100	70-016-0200	70-016-0200	70-016-0200
45	Main PCB Assembly	70-027-0100	70-027-0200	70-027-0300	70-027-0300	70-027-0300
46	Fuse	70-027-0101	70-027-0101	70-027-0101	70-027-0101	70-027-0101
47	Clip Nut	70-001-0105	70-001-0105	70-001-0105	70-001-0105	70-001-0105
48	Upper Shell	70-001-0101	70-001-0101	70-001-0201	70-001-0301	70-001-0301
49	Storage Box	-	-	70-053-0100	70-053-0100	70-053-0100
50	Bushing Gromment	70-017-0100	70-017-0100	70-017-0100	70-017-0100	70-017-0100
51	Socket Cover	70-030-0100	70-030-0100	70-030-0100	70-030-0100	70-030-0100
52	Air Pressure Gauge	70-025-0100	70-025-0100	70-025-0100	70-025-0100	70-025-0100
53	Cord Bushing	70-033-0100	70-033-0100	70-033-0200	70-033-0200	70-033-0200
54	Electric Outlet	70-029-0100	70-029-0100	70-029-0100	70-029-0100	70-029-0100
55	Handle	70-001-0103	70-001-0103	-	-	-
56	Front Handle	-	-	70-042-0100	70-042-0200	70-042-0200
57	Rear Handle	-	-	70-043-0100	70-043-0200	70-043-0200
58	Wheel Support Frame	-	-	70-041-0101	70-041-0201	70-041-0201
59	Wheel Axle	-	-	70-041-0103	70-041-0203	70-041-0203
60	Wheel	-	-	70-041-0102	70-041-0102	70-041-0102
61	Wheel Cap	-	-	70-041-0104	70-041-0104	70-041-0104
62	Hardware Kit	70-056-0100	70-056-0100	70-056-0200	70-056-0200	70-056-0200

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HeatStar Oil Fired Heaters

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please call one of our technicians for assistance.

If you need technical assistance, feel free to call **Portable Heater Parts at 1-800-362-6951 or e-mail us at techservice@portableheaterparts.com**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Brand Names Include:
Enerco
Mr. Heater
HeatStar

HEATER INDEX

BTU and Description	Fuel Type	Page No.
50,000 Mr. Heater	Kerosene	107
75-175,000 Mr. Heater	Kerosene	108

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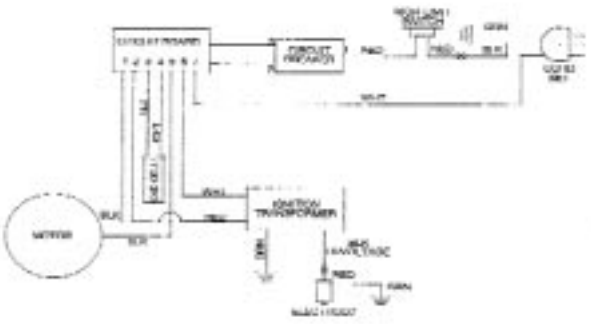
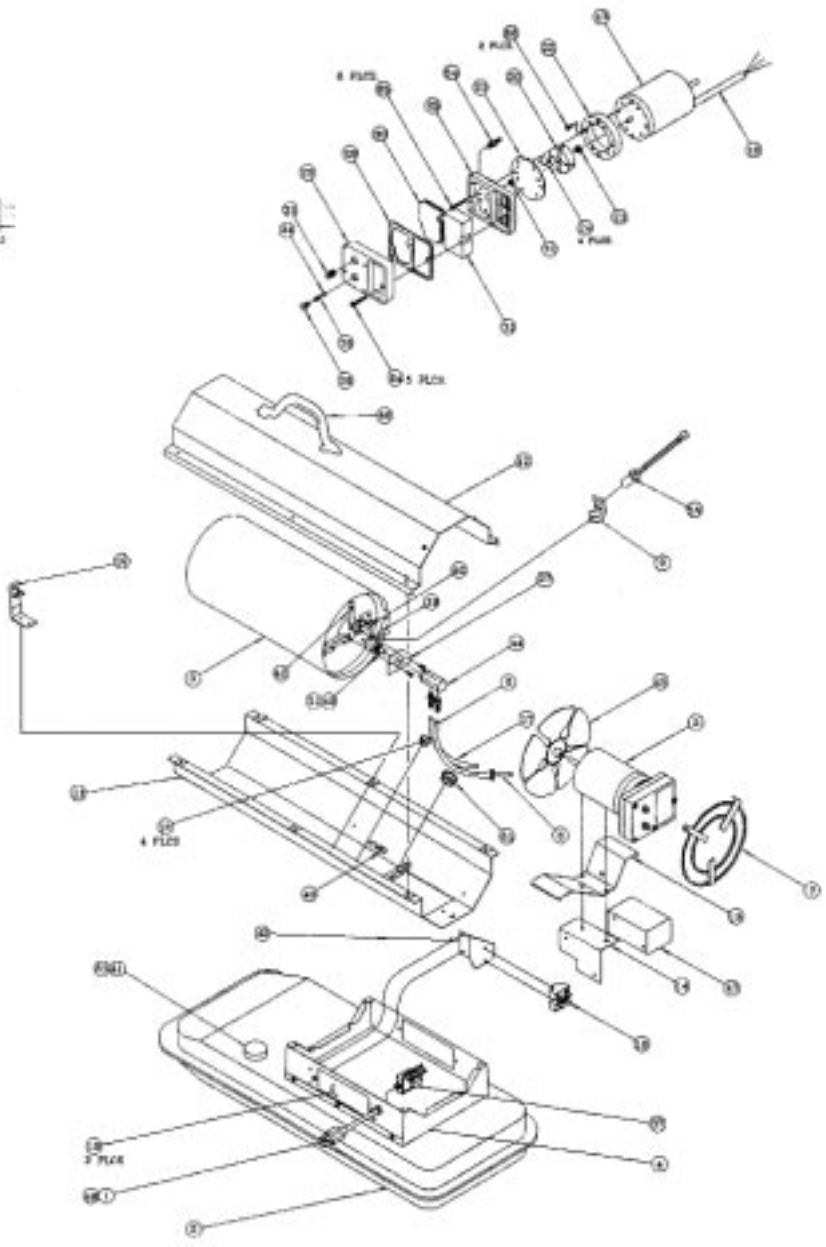
50,000 BTU Forced Air HeatStar Oil Fired Heater

Model Numbers
MH50K





Key No.	Part No.	Description
1	1036	Power Cord Assembly
2	1676	Fuel Tank Assembly
3	1679	Radiation Shield Assy.
4	1688	Control Box Assy.
5	1682	Power Pac Assembly
6	1686	fuel Tube Assy.
7	1685	Grille Assembly
8	-	Fuel Filter Assembly
9	4011	Oil Cad Cell Bracket
10	3449	Motor Cord Sleeve
11-1	1802	Bottom Shell
12-1	3701	Top Shell
13	3704	Motor Mounting Brkt.
14	3705	Ignition Mounting Brkt.
15	-	Access Panel
16	-	Start Relay
17	3725	Air Tube
18	6225	Snap Bushing
19	1796	High Limit Control Assembly
20	6831	Air Pump Rotor
21	6832	Backing Plate
22	6833	Air Pump Cylinder
23	6834	Nylon air Pump Insert
24	6835	Air Pump Vane
25	6836	Lower Housing
26	6837	Upper Housing
27	4171	Nozzle Mounting Plate
28	6839	Gasket
29	6842	Adjusting Screw
30	6843	Outlet Filter
31	6844	Inlet Filter
32	6848	O Ring
33	6849	Nylon Pipe Plug
34	6850	Relief Ball, 1/4” Dia.
35	6851	Spring, 24 O.D. x .58
37	6863	Oil Flame Cntrl Assembly
38	6865	Cad Cell Flame Sensor
39	-	Comb. Cmbr. Cyl. Assembly
40	3843	Electrode Mtg. Brkt.
41	6993	Oil Fuel Cap
42	-	Start Relay Brkt.
43	7399	Motor, 1/4 HP
44	7790	Nozzle Adapter

Key No.	Part No.	Description
45	7421	Fan
46	7095	Handle
47	1684	Ignitor Assembly
48	7416	Fuel Air Aspir. Nozzle
49	6223	Strain Relief Bushing
50	1803	Electrode Assembly
51	7429	Extrnl. Retaining Ring
53	3487	Fuel Cap Gasket
54	6847	Hose Barb Fitting
61	7424	Snap Bushing, Nylon
64	6838	Screw, Tapping #9 x 1-1/4”
65	6908	Screw, Machine #10 x 1-1/4”
66	6906	Screw, Tapping #10 x 1/2”

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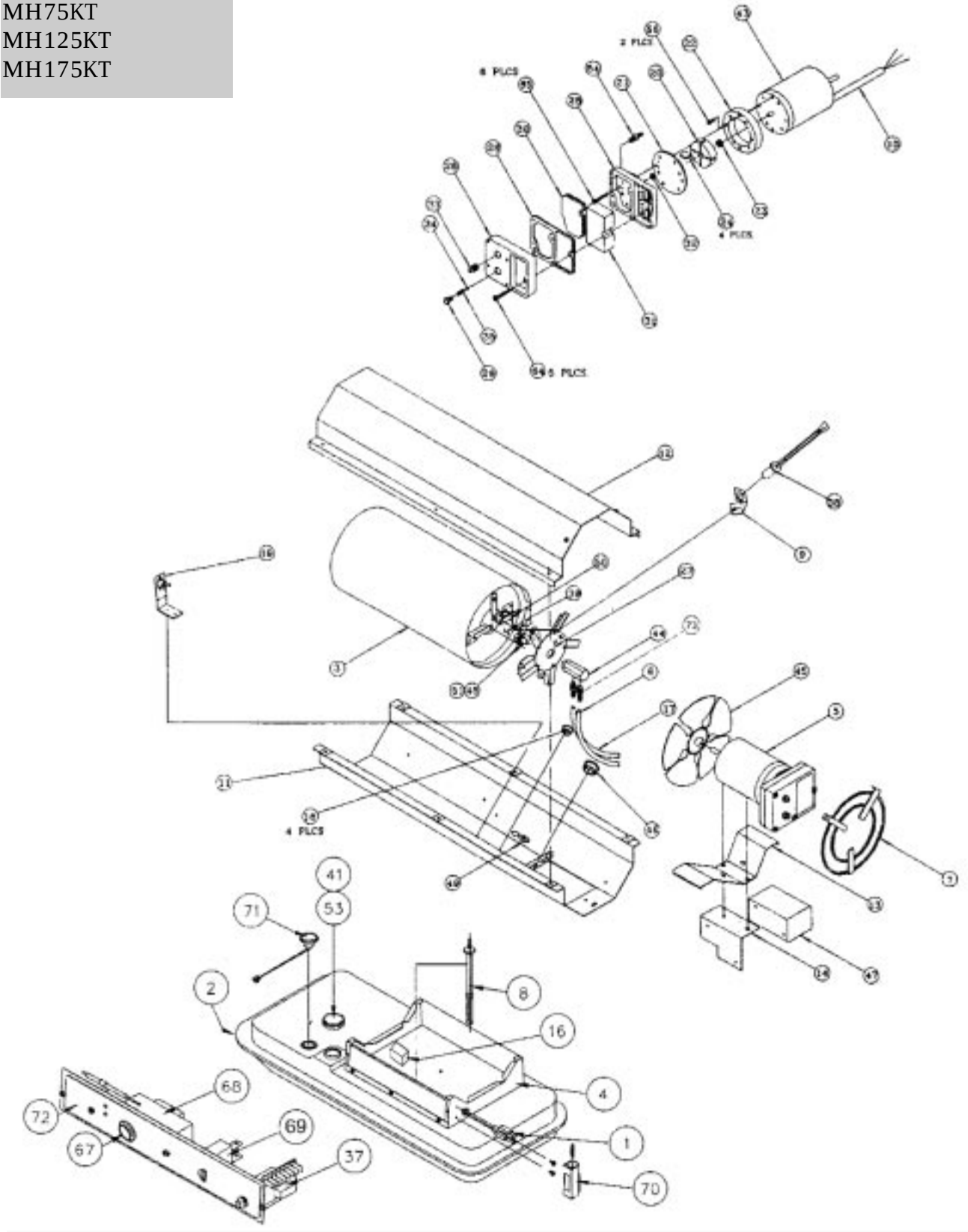
75-175,000 BTU Forced Air HeatStar Oil Fired Heater

Model Numbers
MH75KT
MH125KT
MH175KT



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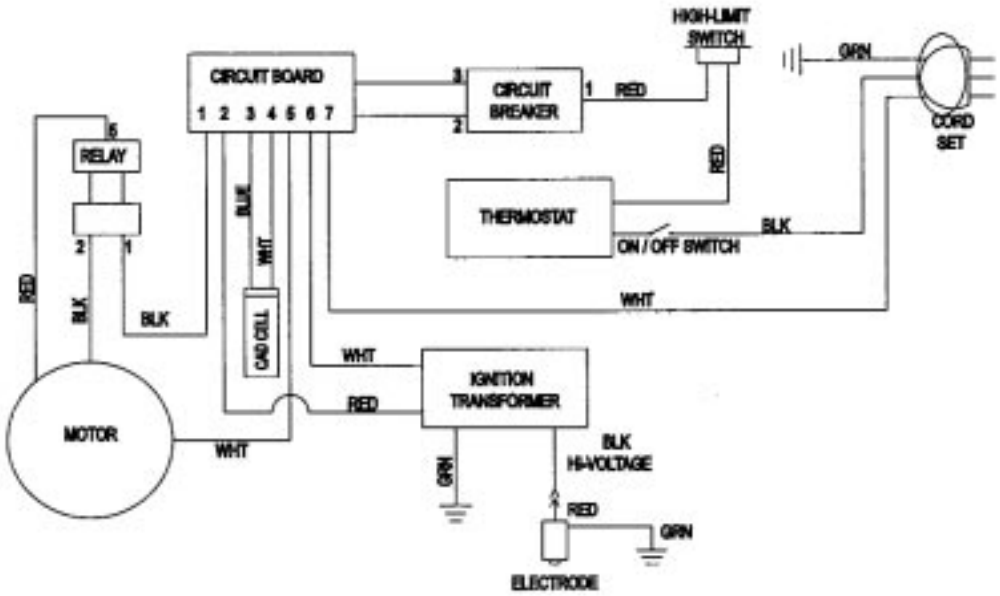
75-175,000 BTU Forced Air HeatStar Oil Fired Heater



Key No.	75KT Part No.	125KT Part No.	175KT Part No.	Description
	75KT	125KT	175KT	
1	1036	1036	1036	Power Cord
2	2213	2214	2214	Fuel Tank Assembly
3	2215	2216	1783	RadiationShield Ass'y
4	22217	22218	22219	Control Box Ass'y
5	22258	22259	22259	Power Pac Ass'y
6	24343	24346	24346	Fuel Tube
7	28734	21771	21768	Grille Assembly
8	28779	28780	28780	Fuel Filter Ass'y
9	24011	24011	24011	Oil Cad Cell Bracket
10	23449	23449	23449	Motor Cord Sleeve
11	21075	21125	21175	Bottom Shell
12	22075	22125	22175	Top Shell
13	24332	24333	24334	Motor Mounting Brkt
14	22103	22103	22103	AC Receptacle
16	28788	28735	28735	Start Capacitor
17	23725	24345	24345	Air Tube
18	26225	26225	26225	Snap Bushing
19	21796	21797	21798	High Limit Control
20	26831	26831	26831	Air Pump Rotor
21	22104	22104	22104	AC Receptacle Cover
22	26833	26833	26833	Air Pump Cylinder
23	26834	26834	26834	Nylon Air Pump Insert
24	26835	26835	26835	Air Pump Vane(4 ea.)
25	22106	22106	22106	Outlet Housing
26	23255	23255	23255	Inlet Housing
27	———	22257	22257	Burner Head Ass'y
28	23260	23260	23260	Gasket
29	23265	23265	23265	Adjusting Screw
30	23270	23270	23270	Outlet Filter
31	23275	23275	23275	Inlet Filter
32	26848	26848	26848	O Ring
33	26849	26849	26849	Nylon Pipe Plug
34	26850	26850	26850	Ball,. Pressure adj.
35	26851	26851	26851	Spring, Pressure adj.
37	22141	22141	22141	Oil Flame Control Ass'y
38	26865	26865	26865	Cad Cell Flame Sensor
39	22232	22233	22234	Comb.Chamber Cyl.Ass'y
41	28736	28736	28736	Oil Fuel Cap
43	28737	28738	28738	Motor
44	27790	28739	28739	Nozzle Adapter
45	28740	26885	26866	Fan
46	———	26227	26227	Snap Bushing
47	22142	22142	22142	Igniter Assembly
48	28741	28742	28743	Fuel Air Aspir. Nozzle
49	26223	26223	26223	Strain Relief Bushing
50	22143	22144	22144	Electrode Assembly
51	27429	27429	27429	Extrnl. Retaining Ring
53	22145	22145	22145	Fuel Cap Gasket
54	26847	28744	28744	Hose Barb Adapter
64	26838	26838	26838	Screw, Tapping #9 x1-1/4"
65	26908	26908	26908	Screw,Machine#10x1-1/4"
66	26906	26906	26906	Screw, Machine#10 x 1/2"
67	21942	21942	21942	Thermostat Knob
68	21734	21734	21734	Thermostat Assembly
69	28785	28785	28785	ON/OFF Switch
70	28782	28781	28781	Pressure Gauge
71	28791	28778	28778	Fuel Gauge
72	22148	22149	22149	Control Panel
73	———	28783	28783	Hose Barb Adaptor
*	28682	28683	28683	Logo, Mr. Heater
*	27094	———	———	Clip Hanle Mtg.
*	27095	———	———	Handle
*	21683	21683	21683	Lead Wire Ass'y Green
*	21040	21040	21040	Lead Wire Ass'y Black
*	28745	26862	26862	Fuel Filter Bushing
*	22146	22146	22146	Bracket Thermostat Mtg.
*	———	28790	28790	Adapter,T-hose barb
*	26070	26070	26070	Clamp Loop
*	24171	———	———	Nozzle mtg. plate
*	0854NR	0854NR	0854NR	(Older Models) Reset switch black button
*	26886	26886	26886	(Newer Models) Small red button

* Not shown on exploded view

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Gas Heater Service Information

This section is designed to give you the information you will need when you service your customers' heaters. You will find useful information including test procedures and trouble shooting for various heaters.

The information contained in this section has been compiled using techniques that have been proven and tested in the field.

PHP recommends that these tests and procedures be performed by a certified technician or mechanic. Some of the tests and procedures may be dangerous should they be performed inaccurately or carelessly.

Use common sense in handling anything with electrical current or that has exposed moving parts when performing tests or procedures. Always wear proper safety equipment, such as safety glasses and gloves when necessary.

If you have questions, contact the PHP technical service department at **800-362-6951 ext. 2 or email us at techservice@portableheaterparts.com.**

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The Three Types of Propane Heaters

Forced Air

These heaters use an internal motor and fan to distribute heat. These are the ones commonly called "torpedo" heaters. Forced air propane heaters are available in sizes ranging from 30,000 BTU'S to 750,000 BTU'S through PHP. The advantages of the forced air heater are as follows. The whole unit does not have to be in the area to be heated (only the discharge end of the unit has to be in the area to be heated). This allows clean air exchanges with outside air. In addition, the forced air heater is also a "directional " heater. This means heat can be focused on a certain item or place (but never at a propane cylinder). The forced air heater usually has multiple safety features. These usually consist of high limit switches, sail switches, air proving switches, tip switches (usually found on older L.P. units), spark plugs, igniter electrodes, ignition control boards, valves, and even thermocouples. In addition, some of the forced air heaters can use a thermostat for temperature control. Moreover, a few models may even be ducted. As with all heating systems, there are a few disadvantages associated with forced air units. The first disadvantage is the fact that electricity is required for operation. Another disadvantage is that forced air is more of a complex unit to troubleshoot and repair. Lastly, forced air units rely on three components to work properly. Those components are the timed delivery of air, spark, and fuel (in that order).

Radiant

These heaters work on the principle of transferring heat from one object to another without heating the space in between. For instance, the roof of a black car that has been sitting in the sun on a cool 60 degree day is much warmer than the surrounding air. Therefore, the radiant heat from the sun heated the roof of the car without heating the space in between. That is the concept of radiant heat. As with all heating systems, there are advantages as well as disadvantages. The first advantage is that most radiant heaters require no external electricity. The second advantage of radiant heat is that the ground level is heated first, this way you do not waste as many BTU's as in other heating sources. The third advantage is that the most popular radiant heaters are in the 100,000 BTU range, making them ideal for using the standard 100 pound propane cylinder. The disadvantages are few. First, very few models have a thermostatic gas valve (meaning not thermostat capable). Second, there are relatively few BTU sizes available, mainly 100,000 BTU and 250,000 BTU units.

Convection

These heaters work on the principle of heat stratification. Heat stratification means heating the topmost areas first, then forcing the heat down in layers until it reaches the comfort zone (usually from ground level to 6' off the ground). The main advantage of convection heaters is that they are the least expensive heaters to purchase (in other words, the most BTU'S for the buck!). The disadvantages of convection heaters are twofold. First, since convection heaters work on the theory of heat stratification, most of your fuel dollars quickly rise with the heat to the ceiling and away from the comfort zone. Second, with very little difference in price between the 80,000 BTU models and the 200,000 BTU models, people usually buy the most BTU's for the buck. What people do not realize is the fact that the 200,000 BTU model needs two or three 100 pound cylinders manifolded together to attain full fire in most heating applications. In general, people who buy these heaters plan to use their 20-pound barbeque cylinders as their fuel source. For an explanation on why the 20 pound cylinder will not work properly, please see the "BOILING PROCESS". A good majority of the technical issues related to these heaters is fuel supply related.

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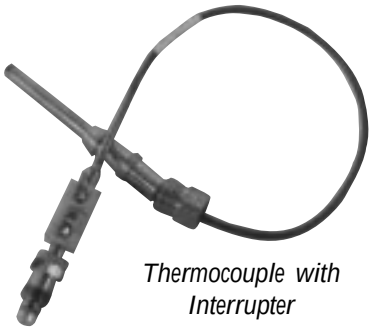
Component Description and Operation

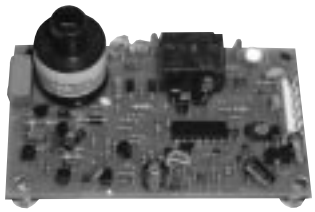
Thermocouple



Thermocouple with Interrupter

The thermocouple is a safety feature that works with a thermoelectric gas valve to allow or interrupt the flow of fuel. The thermocouple works on a principle of two dissimilar metals, that generates D.C. electricity, when heated. Because of this technology, it is important that the thermocouple's sensing bulb is in the hottest portion of the flame pattern to work properly. The D.C. electricity is rated in millivolts. The D.C. electricity passes down the thermocouple until it reaches the power coil located inside of the thermoelectric gas valve. The thermocouple needs to generate and send at least 17 millivolts of D.C. electricity to the thermoelectric gas valve to keep the power coil compressed or energized, and let allows gas to pass through. A thermocouple may also have an electrical interrupter connection. An electrical interrupter connection is an electrical interrupter located between the tip of the thermocouple and the nut that threads into the gas valve. The purpose of this interrupter is that it allows the manufacturer to install a safety feature on the thermocouple to break the D.C. circuit in case of a unit malfunction. The most common use of the interrupter connection is to install a high limit switch. For example, if your heater has a high limit switch attached to the interrupter, and the switch gets too hot, the limit switch will open up contacts and break the polarity between the thermocouple and power coil, thereby shutting down the flow of fuel.

D.S.I. Control



Some people call this part the "brain box" of the heater. Actually, D.S.I. stands for Direct Spark Igniter. However, this part controls a lot more than ignition. It controls the following circuits.

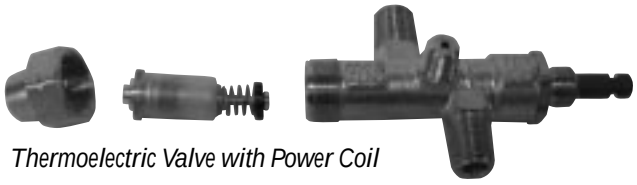
Ignition - The board produces the secondary voltage during the ignition process.
Flame sensing - The board monitors the flame through a spark plug, electrode, or flame rod.
Electronic delay timer (pre-ignition purge cycle).
Supplies the solenoid circuit with power.

The most common brand names for D.S.I. controls are:

Ram controls - Ram controls have come in three different colors, blue, white, or gray.
Gaslighter controls - Gaslighter boards have usually been black in color.
Fenwall controls - Fenwall controls are usually gray in color.

The last point to mention about D.S.I. controls is that if you have one in your heater, two things are true. 1) your heater can use a thermostat, and 2) your heater will not have a thermocouple.

Gas Valves

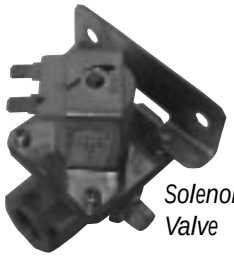


Thermoelectric Valve with Power Coil

Gas Valves are used for two main purposes. The first is to shut off the flow of fuel in case of malfunction, the second is to determine manifold gas pressure.

There are two different types of gas valves (thermoelectric & solenoid) used in portable heaters.

Thermoelectric - Thermoelectric gas valves work on the principle of D.C. voltage being generated by a thermocouple. Thermoelectric valves are sometimes known as the "push button" valves. The thermoelectric valve receives the D.C. voltage generated by the heated thermocouple and then energizes (magnetizes) the power coil located inside of the valve body. The power coil needs this voltage to stay compressed (magnetized) to allow gas to flow through to the burner. The minimum voltage required to keep the power coil energized is 17 millivolts of D.C. electricity.



Solenoid Valve

Solenoid valves - Solenoid valves require A.C. voltage (usually 120 volts) to electronically close, and to physically open. When the solenoid valve closes, it is actually electronically closing (magnetizing) the coil to allow gas to flow thru. Power to the solenoid valve never comes directly from the cord. It usually passes through a D.S.I. control first. By passing through the D.S.I. first, it allows the D.S.I. to shut off the voltage to the solenoid if it senses a problem such as an open electrical circuit, lack of flame sensing, or lack of fuel to name a few.

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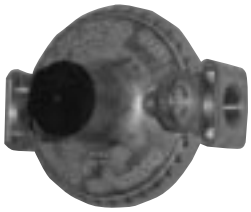
Component Description and Operation

High Limit Switch

Various High Limit Switch Examples

High limit switches are switches that are normally electronically closed, but will open electrical contacts at a certain temperature. It accomplishes this with a bi-metal sensing element. A bi-metal is a temperature sensitive metal that expands with heat. Therefore, as the heater runs, and as the bi-metal gets warm, it begins to warp. When it reaches a certain temperature it will open up the electrical contacts. The temperature varies from switch to switch, and is listed on each switch. For example, if the markings on a limit switch read L240, than the limit switch opens up electronically at 240 degrees and will lead to an open circuit shutdown.

Regulator



A regulator, by definition, is a means to adjust to a standard rate and /or to adjust to make your work accurate. A regulator takes tank pressure and breaks that down to give you a known and consistent lower pressure out of the regulator's outlet. Every propane heater, regardless of how big or small, has to have at least one pressure regulator. Each propane heater should indicate the inlet pressure ratings on the specification plate to assist in selecting the appropriate regulator(s) for your application. For the purposes of this manual, there are three basic types of regulators: the first stage regulator, the second stage regulator, and the appliance regulator. Your heater may need to use any or all three of these regulators, depending on your heater and your application. Again, if you have any questions about regulators, please call your local propane dealer or you can contact PHP anytime.

Tank Connectors

Tank connectors are the devices used to connect the first stage regulator to the vapor withdraw propane cylinder. While all tank connectors serve the same function, the current industry standard is to use certain connectors with certain applications only (certain applications meaning capable BTU output, whether or not there is an excess flow valve, and whether it has left hand or right hand pipe threads). While there are many types of tank connectors on the market, we are going to discuss just a few of the more popular ones only. The most popular tank connector is the soft nose P.O.L., followed by the Acme tank connector.

Soft nose P.O.L. - The soft nose P.O.L. fitting is the fitting that most service people are familiar with and is still in use today on all vapor withdraw cylinders over 40 pounds. The soft nose P.O.L. consists of the following component parts: The right hand thread P.O.L. nipple which actually goes into the L.P. vapor withdraw valve on the top of the cylinder, the 7/8" hex nut (G1643) which tightens the nipple into the withdraw valve, the o-ring (G1653-3) to help maintain a tight seal inside the valve, and lastly, the excess flow valve which will shut off the flow of fuel to the unit if there is a cut or rupture of the gas supply hose. The excess flow valve is the only non- replaceable part in the P.O.L. assembly. Soft nose P.O.L. fittings vary by BTU output as well as thread type, so it is important to use the correct part number listed on the heater's breakdown.

Acme Tank Connector - The Acme tank connector has become more popular because of the new code requiring the O.P.D. (overflow protection device) withdraw valve on cylinders of 40 pounds and under. The Acme tank connector has a spring assembly mounted on the inside of the fitting itself to measure backpressure. The Acme tank connector will allow only a limited amount of propane to pass through it until the gas hose is pressurized. Once the hose is pressurized, the backpressure on the spring assembly will compress and allow the proper amount of propane needed for the burn to pass through. In order to get this tank connector to compress the spring assembly and allow the proper amount of fuel through, you need to close all the gas connections past the supply hose. Then turn the propane cylinder on, and let the unit set until the fuel supply hose pressurizes. This pressurization can take anywhere from 15 seconds to an hour. The Acme tank connector is actually available as a whole unit only, with no user serviceable components. If any part of the Acme tank connector ever breaks or fails, then the fitting needs to be replaced. This fitting also has an excess flow valve that will shut down the flow of fuel to the unit if there is a cut or rupture of the gas supply line. Acme tank connectors come in two different varieties. The black handled Acme is rated for outputs of 71,000 BTU's or less, while the green handled Acme is rated from 71,000 BTU's to 200,000 BTU's.

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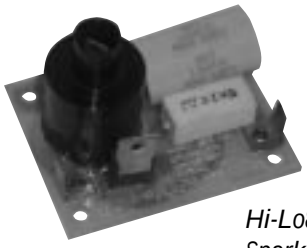
Component Description and Operation

Spark Igniter

Spark igniters are small, self-contained controls whose sole purpose is to provide secondary voltage to the spark plug/electrode. You can look at spark igniters as the spark generators. These controls are found on propane forced air heaters that use thermoelectric gas valves but do not have push button (Piezo) ignition. If the unit has a thermoelectric gas valve, then the heater will automatically have a thermocouple. Spark igniters are continuous ignition, generating a constant spark at up to 25,000 volts. If the heater has a spark igniter and a thermoelectric gas valve, then the heater cannot use a thermostat. There are two different spark igniters being used in the industry today. The first one is the Eaton spark igniter, and the second one is the Hi-LO 801. Both of these igniters have no user serviceable parts.

Eaton Spark Igniter

Eaton Spark Igniter - Both Desa (Master, Reddy, Remington, etc) and Scheu Products (National Riverside, All Pro, and Universal) use the Eaton spark igniter. They are blue in color and have four wire connections consisting of an ignition lead, a hot wire, a common wire, and a ground wire. The Eaton is an enclosed spark igniter with only the 1/4" electrical connections exposed.



Hi-Lo801 Spark Igniter

Hi-Lo 801 spark igniter is used by Scheu Products exclusively. The Hi-Lo 801 is an open spark igniter with the resistors and diodes visible. The Hi-LO 801 is also a four-wire spark igniter. The Hi-LO 801 has one exception to the application rule listed earlier. The exception is that the HI-LO 801 was actually used on National Riverside forced air heaters made from 1978 to 1991 that could use a thermostat. At different times during that period those heater model numbers included the 80FA, the 150FA, and the 3500FA.

Piezo Igniter with Nut

Piezo Igniter - The Piezo igniter is what is commonly referred to as the "push button" igniter. Piezo igniters are found on both Desa and Scheu heaters. The Piezo is also found on all three types of propane heaters: radiant, convection, and forced air models. The Piezo igniter generates a spark when an internal spring-mounted piece of metal is pushed across a crystal when the "push button" is depressed. There are no user serviceable parts inside a Piezo igniter. There is one rule of thumb when it comes to Piezo igniters; if the heater has a Piezo igniter, then it also has a thermoelectric gas valve, a thermocouple. If a heater has these components, it cannot use a thermostat.

Flame Rods/Sensors

Flame rods and flame sensors are parts that work to prove the existence of flame. Although they both try to prove the existence of flame, flame rods and flame sensors go about accomplishing this in different ways. It is important to note that there are no user serviceable parts on either of these parts.

Flame Rod - The flame rod is a metal probe that protrudes into the area of combustion. The flame rod conducts the current from the ions that are naturally occurring. Ions are the static electricity that is in the air. The explosions from the combustion process straighten out the ions and the burner becomes negatively charged, and the flame rod becomes positively charged. It delivers the charge to the control board to prove the existence of combustion. Because flame rods vary by manufacturer, it is important to use the factory authorized replacement only. In addition, flame rods usually have only one wiring post.

Flame Sensors - Like the flame rod, the flame switch is also a probe that protrudes into the combustion chamber. However, that is where the similarity ends. The flame switch is not usually all metal, for there is a sensing element located inside of the metal probe. The flame switch is a normally electronically open, but when the unit is exposed to heat, the sensing element expands to close the circuit. Unlike the flame rod, the flame switch has two wiring posts attached to them. Since flame switches vary by manufacturer, by temperature, by length, and by application, it is important to use the factory authorized replacement only.

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Component Description and Operation

Control Relay

The control relay is a safety feature added to some of the newer forced air propane heaters that use a thermocouple and a thermoelectric valve. Two of the major propane heater manufactures mentioned in this manual use control relays. What the control relay's purpose is to allow the D.C. electric circuit (the thermocouple, the high limit switch, and the thermoelectric gas valve) and the A.C. electric circuit to interface with each other. In other words, if the high limit switch opens contacts, then the whole unit will shut down.

Fan Blades

(Forced Air Heaters Only) The fan blade in the propane forced air heater plays an extremely important role in the operation of the entire heating system. It has many purposes. First, its job is to pull air in through the back of the unit to cool the internal components. Next, (and most importantly) the fan blade circulates air around and thru the combustion chamber. Not only is the fan blade responsible for producing the hot, forced air, but also it is extremely important in determining WHERE the burn takes place in the combustion chamber. Since a propane forced air heater has no nose cone, the air movement delivered by the fan blade is of extreme importance in determining where the combustion takes place. All of your safety components in your forced air heater rely on the burn occurring at a particular place in the combustion chamber for proper monitoring and proving.

Pilot Orifice

(Radiant and Convection Models Only) The pilot orifice is used on radiant and convection heaters that utilize a thermoelectric (push button) gas valve. There are two main purposes of the pilot orifice. The first (and most important) reason is to heat the thermocouple for safety monitoring. The second reason is so that every time you want heat, you do not have to go through the ignition process. Since the pilot orifice requires the least amount of propane, and has the smallest diameter, it is usually the first place to become restricted or obstructed during normal operation.

Burner Orifice

All propane heaters have a burner orifice. Whether the burner orifice is a single-port (having one gas opening and a flame deflector) or a multi-port (having six or more smaller openings and may or may not have a flame deflector), they both serve the same purpose. That purpose is to deliver propane into the area of combustion in a way to allow for safe, even, and proper combustion. All burner orifices have a certain outlet size that is determined by the manufacturer and should NEVER be altered.

Motor

The motor in a forced air propane heater has a multitude of functions. One of the motor's responsibilities is to bring fresh air around and through the combustion chamber for combustion and equal distribution of heat. The motor also cools down the heater's internal components with that same inlet air. By turning the fan blade, the motor has as much to do with where the burn takes place in the combustion chamber as any other component in the heater.

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Gas Fired Heaters

Introduction to Natural Gas Heaters

Natural gas heaters will have distinct advantages and disadvantages when compared to the propane heaters mentioned earlier. The main advantage of using natural gas heaters is the availability of fuel supply. Natural gas is available in most communities, as well as in most industrial situations. With the fuel supply already on site and always available, natural gas may be the best alternative. As the availability for natural gas increases, so will the natural gas heater's share of the portable heater market. However, natural gas does have some disadvantages. First, natural gas is not available in all areas. Second, the portability of natural gas heaters is limited by the gas pressure, as well as by the length and diameter of the fuel supply hose. Next, it is important to maintain the proper volume of natural gas. The last two disadvantages of natural gas heat are that there are not many heating applications where high pressure (pounds of pressure) natural gas is available, and that there are not as many different model numbers available for natural gas as there are for propane. However, there will be situation where the best heater option is to use natural gas.

Technical Issues with Natural Gas Heaters

The number one technical issue with natural gas heaters is the ability to get the proper natural gas volume. Most natural gas heaters usually do not come with a fuel supply hose because the inside diameter (I.D.) of the hose size will vary depending on the available gas supply pressure. That happens to be the number one technical issue with natural gas heaters: having the correct natural gas volume.

The Three Types of Natural Gas Heaters

Forced Air

These heaters are heaters that use an internal motor and fan to distribute heat. Forced air heaters are commonly called "torpedo" heaters. Forced air natural gas heaters range in size from 150,000 BTU'S to 750,000 BTU'S through PHP. The advantages of the forced air heater are many. The whole unit does not have to be in the area to be heated; only the discharge end of the unit has to be in the area to be heated. This allows clean air exchanges with outside air. In addition, the forced air heater is also a "directional" heater. This means heat can be focused on a certain item or place. The forced air heater usually has multiple safety features. These usually consist of high limit switches, sail switches, air proving switches, tip switches (normally found on older units), spark plugs, igniter electrodes, ignition control boards, valves, and even thermocouples. In addition, forced air heaters that do not have a thermocouple can use a thermostat for temperature control. As with all heating systems, there are a few disadvantages associated with forced air units. The first disadvantage is the fact that electricity is required for operation. Another disadvantage is that forced air is more of a complex unit to troubleshoot and repair. Lastly, forced air units rely on three components to work properly: the timed delivery of air, spark, and fuel (in that order).

Radiant

These heaters work on the principle of transferring heat from one object to another without heating the space in between. For instance, the roof of a black car that has been sitting in the sun on a cool 60 degree day is much warmer than the surrounding air. Therefore, the radiant heat from the sun heated the roof of the car without heating the space in between. That is the concept of radiant heat. As with all heating systems, there are advantages as well as disadvantages.

The first advantage is that most radiant heaters require no external electricity. The second advantage of radiant heat is that the ground level is heated first, maximizing the BTU efficiency more so than other heating sources. The third advantage is that the most popular radiant heaters are in the 100,000 BTU range, making them ideal for using standard residential natural gas pressure. The disadvantages are few. First, very few models have a thermostatic gas valve which means you cannot use a thermostat. Second, there are relatively few BTU sizes available, mainly low pressure 100,000 BTU models and high pressure 250,000 BTU models.

Convection

These heaters work on the principle of heat stratification. Heat stratification means heating the topmost areas first, then forcing the heat down in layers until it reaches the comfort zone (usually from ground level to 6' off the ground). The main advantage of convection heaters is that they are the most inexpensive heaters to purchase, providing the most BTU'S for the buck! The disadvantages of convection heaters are twofold. First, since convection heaters work on the theory of heat stratification, most of the fuel dollars quickly rise with the heat to the ceiling and away from the comfort zone. Second, with very few convection models available for natural gas, large heating applications are not usually practical.

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Various Ignition Control Boards (D.S.I.'s)

RAM-1M5-01

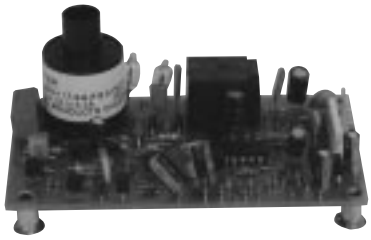
The 7499NR (Ram1M5-01) was used by Scheu exclusively. This ignition control does flame sensing thru the 1/4" male spade connection located on top of the board via the electrode (or spark plug) and ignition lead. It has individual wires running to 1/4" male spade connections on the side of the unit.

RAM-1

Desa, Scheu, L.B. White, and even Toro used the Ram-1 control extensively in heaters. This control unit required a wiring harness that attached to the side of the unit. This ignition control does flame sensing thru the top (base stud) of the board via the electrode (or spark plug) and ignition lead.

RAM-3MC2-01

The 08810 is a control board that is used by L.B. White exclusively. This board is a diagnostic board. That means that the board is capable of sending an electrical pulse signal to a small light (L.E.D.) that will flash for a certain amount of times, depending on what is wrong with the heater. This board monitors and delivers 24 volts to the gas valve, 120 volts to the motor, and it generates and delivers approximately 15,000 volts to the electrode for the ignition sequence. This board also utilizes a base stud located on top of the board to attach the ignition lead.



The 7801NR was the Scheu replacement for the 7499NR Ram. This ignition control was the first control to eliminate the second common wire. In other words, instead of having a 120 volt return and a valve return, you just have the one common (white) return. This board requires a wiring harness for operation. This ignition control does flame sensing thru the top of the board via the electrode (or spark plug) and ignition lead. The 7808NR listed to the right is the direct replacement for this control unit.

MARK10DN-117-3-8.5-8.5-P0062

The 7808NR (or the 110287-01), Made by Gasliter, is the most common ignition control unit used by both Scheu and Desa for heater production at the time of this printing (though they use different wiring harnesses). This control is a "potted" control. The term "potted" means that the board has a jell coating to give a degree of moisture resistance. This control requires a wiring harness for operation. This ignition control does flame sensing thru the 1/4" male spade located on top of the board, via the electrode (or spark plug) and ignition lead. 7808NR is the replacement for the 7801NR.

The Fenwal 7808NR is the same as the Gasliter 7808NR to the left except that at the time of printing, Scheu is the only company using it.

10DN-117-3-8.5-8.5-Q011

The M51605-01 control was used by Desa only. What makes this control stand out from the other Gasliters is that it does not do flame monitoring thru the ignition lead, and the ignition lead connection is only an 1/8" male spade connection. The flame monitoring is accomplished thru a 1/4" male spade located on the front of the board itself (on the terminal labeled "SENS") which will attach to the flame sensor.

10DN-117-3-8.5-8.5-Q012

The M51605-02 (or 7219NR) was once the most common control board used by both Desa and Scheu. This was the first Gasliter board that did the flame sensing thru the ignition post located on the top of the board. In addition, this was the first Gasliter to include all of the individual control wires.

MARK10X-117-3-7-7-Q010

The 05549 control was used by L B White exclusively. This control was used for a few select heater models (some of the 292's and 296's mainly). This control also utilizes the base stud to attach the ignition lead.

The 22301 from L B White works the same way as the 08810 listed on top right.

24VAC 1016-400 SERIES

Gas Heater Service Info.

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Propane Hoses

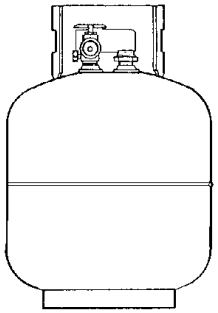
Part No.	Description	Where Used
2510LH	1/4" X 10' w/Left Hand 9/16" x 18 fittings	Sure Flame Torches, LB White Heaters
2510LHFTG	Fitting to connect 2510LH or 2525 LH hoses together	
2510	1/4" x 10' w/1/4" MPT x 1/4" Female Flair Swivel	3500FA, 250, 250A, BLP375 TC250, TC275
2525	1/4" x 25' w/1/4" MPF x 1/4" Female Flair Swivel	Same as above
2525LH	1/4" x 25 w/Left Hand	Torches
2525FTG	Fitting to connect 2510's or 2525 together	
3810	3/8" x 10' w/3/8" MPT x 3/8" Female Flair Swivel	BLP80, BLP150,150FA, 80FA,150FAS
381050	3/8" X 10' w/3/8" MPT x 1/2" Female Swivel	BLP155
382550	3/8" x 25' 1/2" FFIR swivel insert	
3825	3/8" X 25' w/3/8" MPT 3/8" Female Flair Swivel	Optional Hose for LP Heaters up to150,000 BTU's
3850	3/8" x 50' x 3/8" MPT	
3810FTG	Fitting to connect 3810's, 3825's or 3850's together	
5010	1/2" x 10' w/1/2" MPT x 1/2" MPT	
5025	1/2" x 25' w/1/2" MPT x 1/2" MPT	
5050	1/2" X 50' w/1/2" MPT x 1/2" MPT	
54	1/2" x 1/2" Swivel Connector	
7510P	3/4" x 10' w/3/4" MPT each end with Female Swivel Adapter	Optional Hose for Heaters over 375,000 BTU's
7525P	3/4" x 25' w/3/4" MPT each end with Female Swivel Adapter	Optional Hose for Heaters over 375,000 BTU's
7550P	3/4" x 50' x w/3/4" MPT each end with Female Swivel Adapter	

ALL HOSES MEET OR EXCEED O.E.M. SPECIFICATIONS. ALL HOSES UL APPROVED.

1/2" Hoses should be used with low pressure Natural Gas Heaters.

3/4" Hoses should be used with high pressure Natural Gas Heaters.

Propane Tanks



Part#	Description	BTU Content	Wt.
C5	5# Tank	108,000	5
C10	10# Tank	215,000	10*
C20	20# Tank	430,000	20*
C30	30# Tank	645,000	28*
C40	40# Tank	860,000	37*
C50	50# Tank	1,080,000	45
C60	60# Tank	1,300,000	55

* With O.P.D. All tanks will ship UPS.

OPD Valves

- In accordance with the April 1, 2002 National Fire Safety Standards
- All propane cylinders 4# to 40# are now required to contain overfill protection devices

We listed the total BTU content so you could determine approximately how long a heater or any other appliance would last. For example, if you operate a 150,000 BTU heater on 2-100 lb tanks the heater should operate over 14 hours, however, only 90% (approximate) of the contents can be used, so the heater will operate 13+ hours.

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Propane Supplies

Part No. HR1053P
Adjustable High Pressure Regulator
Capacity: 7,500,000 BTU/HR Propane
Outlet Pressure Range: 5-50 PSIG Color: Red
This tee handle adjustable regulator is used on high pressure gas heaters
over 1,000,000 BTU's and as a main supply when several small heaters are
run off of one tank.

Part No. HR1053P

Part No. 230-00
Marshall 230 Regulator
11" W.C. Outlet Pressure 1/4" x 3/8" F.P.T.
This regulator is used on
National Riverside Models:
150FA, 150FAS, 150FAST, 80VC,80FA,100RA.
Master ,Reddy Models:
BLP45,RLP45,BLP80,RLP80,BLP150,BLP155,BLP155T.
REGULATOR CAP (230-00)
Part No. 100-22B Blue

Part No. 230-00

Part No. 130-00
Marshall 130 Regulator
1/4 x 1/4 FPI Replaces Marshall 300
This regulator is used on
National Riverside Models:250,250A.
Master/Reddy Models;
TC250,RC250,TC250A, RC250A, TC275,RC275.
REGULATOR CAP: Part No. 100-22R Red

Part No. 130-00

Part No. LV4403TR4
First Stage High Pressure Regulator
Reduces LP tank pressure to 5-10 P.S.I.
Outlet Pressure: 2,500,000 BTU/hr Propane
Connections: 1/2" Female NPT Inlet and Outlet
Color:Red
Factory set outlet pressure: 10 PSIG

Part No. LV4403B4
Second Stage Low Pressure Regulator
Reduces the Outlet Pressure from First Stage levels down to Burner Pressure,
normally 11" W.C.. Equipped with an Integral Relief Valve.
Capacity: 935,000 BTU/hr Propane
Connections: 1/2" Female NPT Inlet and Outlet
Adjustment Range: 9-13" W.C. (Factory set at 11" W.C.)
Color: Brown

Part No. LV4403TR4
Part No. LV4403B4

Part No. 597FB
Torch Regulator
This handle adjustable regulator is widely used on Propane Torches
and High Pressure Gas Heaters under 1,000,000 BTU's.
Capacity: 820,000 BTU/HR Propane
Outlet Pressure Range: 5-25 PSIG
Connections: 1/4" Female NPT Inlet and Outlet
Color: Red

Part No. 597FB

Single Tank Vaporization

Lbs. Of LP in Cylinder	Maximum Continous Draw in BTU Per Hour at Various Temperatures in Degrees F.							
	70 F	60 F	40 F	20 F	0 F	-5 F	-10 F	-15 F
100	300,000	277,000	214,000	167,000	113,000	85,000	57,000	28,000
90	277,000	247,000	200,000	152,000	104,000	78,000	52,000	26,000
80	236,000	214,000	180,000	137,000	94,000	71,000	47,000	23,500
70	214,000	199,000	160,000	122,000	83,000	62,000	42,000	21,000
60	192,000	176,000	140,000	109,000	75,000	56,000	38,000	19,000
50	167,000	154,000	125,000	94,000	64,000	48,000	32,000	16,000
40	141,000	131,000	105,000	79,000	55,000	41,000	28,000	14,000
30	118,000	107,000	85,000	66,000	45,000	34,000	23,000	11,000
20	92,000	83,000	68,000	51,000	36,000	27,000	18,000	9,000
10	66,000	60,000	49,000	38,000	28,000	21,000	14,000	7,000

2+ Cylinders Vaporization

Lbs. Of LP In Cylinder	Maximum Continious Draw in BTU per Hour in Degrees F.					
	0 F/1 Tank	20 F/1 Tank	0 F/2 Tanks	20 F/2 Tanks	0 F/3 Tanks	20 F/3 Tanks
100	113,000	167,000	248,000	367,000	545,000	807,000
90	104,000	152,000	228,000	334,000	501,000	734,000
80	94,000	137,000	206,000	301,000	400,000	662,000
70	83,000	122,000	182,000	268,000	363,000	589,000
60	75,000	109,000	165,000	239,000	310,000	453,000
50	64,000	94,000	141,000	206,000	280,000	382,000
40	55,000	79,000	121,000	174,000	217,000	319,000
30	45,000	66,000	99,000	145,000	181,000	266,000
20	36,000	51,000	79,000	112,000	174,000	246,000
10	28,000	38,000	62,000	84,000	136,000	184,000

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Propane Supplies

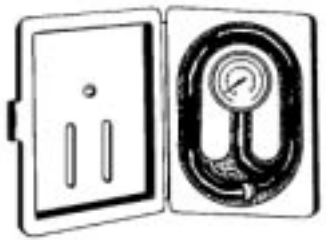
T-Block Manifold
Part No. P400
Inlet Connection: Male POL
Outlet Connection: Female POL
For multiple tank connections

POL Pigtail's
Part No. 1662
30" Long x 1/4" O.D. Tubing
Part No. 1630RU
30" Rubber Hose
Part No. 1648RU
48" Rubber Hose
CONNECTION: POL X POL

Propane Test Gauge - Low Pressure
Part No. G24503
0-15 IN. W.C. Low Pressure Gauge
Utilizes highly effective diaphragm sensing to give accurate indication in low pressure applications. 2 1/2" dial, 1/8" NPT lower mount connection.
Recommended for use on Sure Flame Models SL11B, S1500, S1505 and S2000. Can be used on any Low Pressure Gas Portable Heater.

Part No. HV1027P
0-30 High Pressure Gauge

Flame Control Tester
Part No. 0402NR
Use to test DSI boards
- Easy to connect to almost any board
- Tests & proves operation of: gas valve, spark & flame sensing
- Save hundreds of dollars on replacment flame contorl boards!



Gas Pressure Test Set
Part No. G24507
This test set employs a 2 1/2" dial. Fig. 83K gauge with a dual scale of 0 to 20 ounces and 0 to 35 inches water column. The gauge is mounted securely in a polyethylene box with a hinged cover and gray finish.

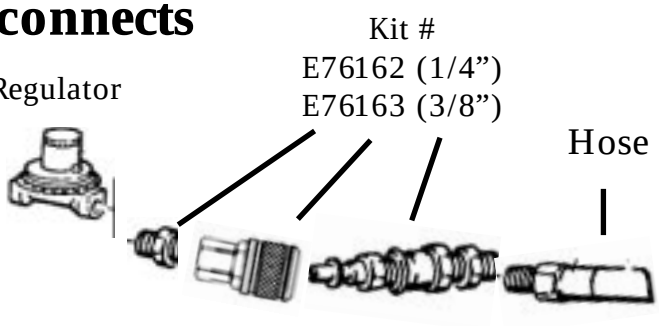
Gas Fired Service Manual
New service manual! Gives an understanding of gas fired heaters, parts description & photos and troubleshooting. It also covers three manufacturers of gas fired heaters: Desa, Scheu and L.B. White.
Part No. GM70103

Part No. TTS8
Brushable Teflon Sealant
This is what our service people use.
Not Suitable for oxygen.

Propane Quick Disconnects

E76163 = 3/8" Quick Connect Kit
E76162 = 1/4" Quick Connect Kit

Kit consists of a fitting to attach quick connect to regulator, and a male quick plug that you connect to hose.



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Desa International Gas Fired Heaters

You will need (1) 100 lb. Cylinder for every 100,000 BTU's your heater produces.

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please refer to the Quick Parts Reference Guide for common replacement parts.

If you need technical assistance, feel free to call **1-800-362-6951** or e-mail us at **techservice@portableheaterparts.com**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Desa Name Brands Include:

Amoco
Cenex
Co-op
Dart
Dayton
Desa
Handy Master
Homelite
John Deere
Knipco
Koehring
Master
Queen Bee
Reddy
Remington
Sears
TSC

HEATER INDEX

BTU Size and Description	Fuel Type	Heater Type	Page No.
9,500 - 16,000 Bistro Table	Propane	Radiant	122
20,000 - 36,500 Patio	Propane	Radiant	123
25,000	Propane	Convection	124
30,000	Propane	Forced Air	125
35-50,000	Propane	Forced Air	126
35,000	Propane	Radiant	127
50,000 (50V)	Propane	Forced Air	128
50,000 (50VA)	Propane	Forced Air	129
55,000 Pro Tough Series	Propane	Forced Air	130
55,000	Propane	Forced Air	131
80,000 (80V)	Propane	Convection	134
85,000	Propane	Forced Air	132
85,000 Pro Tough Series	Propane	Forced Air	133
100,000	Propane	Forced Air	135
125,000 Pro Tough Series	Propane	Forced Air	136
150,000 (155A & 155AT)	Propane	Forced Air	139
100 - 200,000 (200V)	Propane	Convection	141
170,000 Pro Tough Series	Propane	Forced Air	137
170,000	Propane	Forced Air	140
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Quick Parts Reference Guide	**Both**	**All**	**144**

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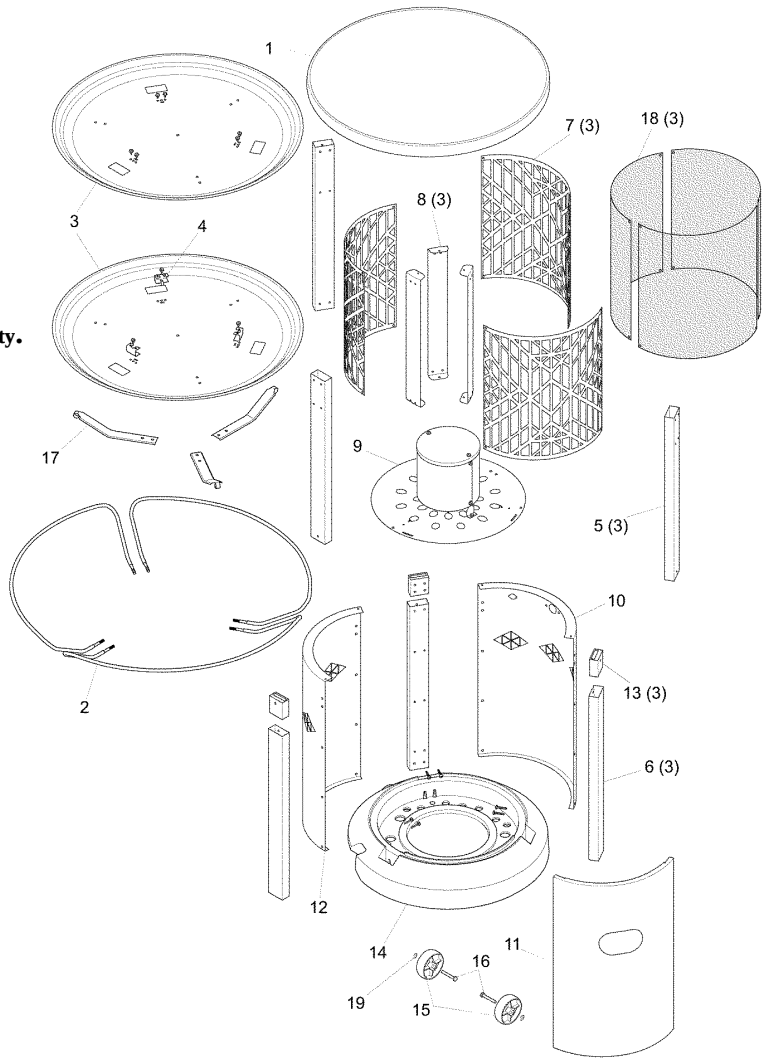
9,500-16,000 BTU Bistro Table Infrared Desa Propane Heater

Model Numbers

TD101
TD103
TD109
TD111

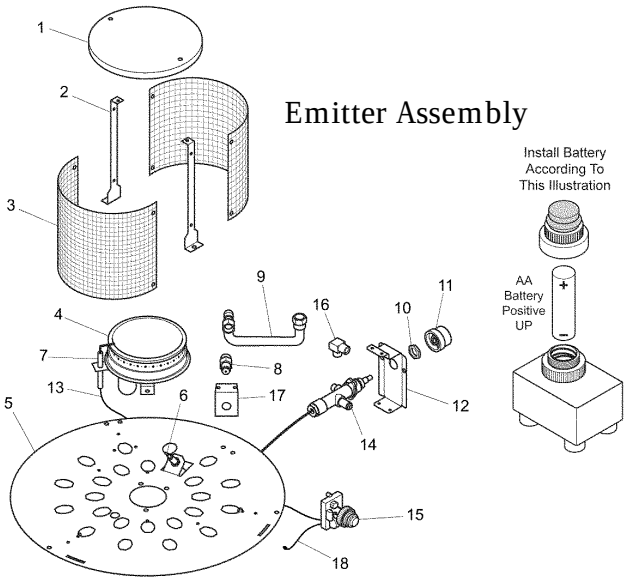
Key No.	Part No.	Description	TD101, TD111	TD103	TD109	Qty.
1	118858-01	Table Top		•		1
	118858-02	Table Top	•		•	1
2	118866-01	Guard Rail	•	•	•	3
3	118856-01	Deflector	•	•	•	2
4	118871-01	Deflector Spacer Bracket	•	•	•	3
5	118850-01	Upper Table Support Pillar	•	•	•	3
6	118850-02	Lower Table Support Pillar	•	•	•	3
7	118855-01	Table Decorative Grate, Mission	•	•		3
	118855-02	Table Decorative Grate, Ornate			•	3
8	118854-01	Deco Grate Pillar	•	•	•	3
9	Emitter Assembly, see illustration		•	•	•	1
10	118859-01	Table Control Panel		•		1
	118859-02	Table Control Panel	•		•	1
11	118860-01	Table Door Panel		•		1
	118860-02	Table Door Panel	•		•	1
12	118851-01	Lower Table Panel		•		1
	118851-02	Lower Table Panel	•		•	1
13	119309-01	Pillar Support Connector	•	•	•	3
14	118848-01	Table Heater Base	•	•	•	1
15	118849-01	Wheel	•	•	•	2
16	118862-01	Table Wheel Axle	•	•	•	2
17	119625-01	Guard Rail Support Bracket	•	•	•	3
18	119940-01	Screen			•	3
19	118863-01	Ring Retainer	•	•	•	2
PARTS AVAILABLE - NOT SHOWN						
	118988-01	Warning Decal	•	•	•	1
	118989-01	General Information Decal	•	•	•	1
	118990-05	Control Position Decal, English	•	•	•	1
	119102-01	Regulator and Hose Assembly	•	•	•	1
	100639-13	Caution Decal	•	•	•	1
	119103-01	Hardware Blister Pack	•	•	•	1
	120574-01	Retention Hook	•	•	•	2
	119422-01	Accessory Cover*			•	1

* Available as accessory for models TD101, TD103 and TD111.



Emitter Assembly

1	119281-01	Emitter Cap
2	119280-01	Emitter Bracket qty. 2
3	118870-01	Emitter Screen qty. 2
4	118864-01	Table Burner
5	118852-01	Burner Support Plate
6	119104-02	Thermocouple
	100898-01	Thermocouple Nut qty. 2
7	119107-01	Ignitor Electrode
8	119106-01	Injector
9	118869-01	Burner Flex Line
10	098508-01	Valve Nut
11	120575-01	Knob
12	118867-01	Valve Mounting Plate
13	120413-01	Ignitor Wire
14	118868-01	Control Valve
15	111435-01	Electronic Ignitor
16	119557-01	Elbow Fitting
17	119610-01	Injector Bracket
18	119611-01	Ground Wire



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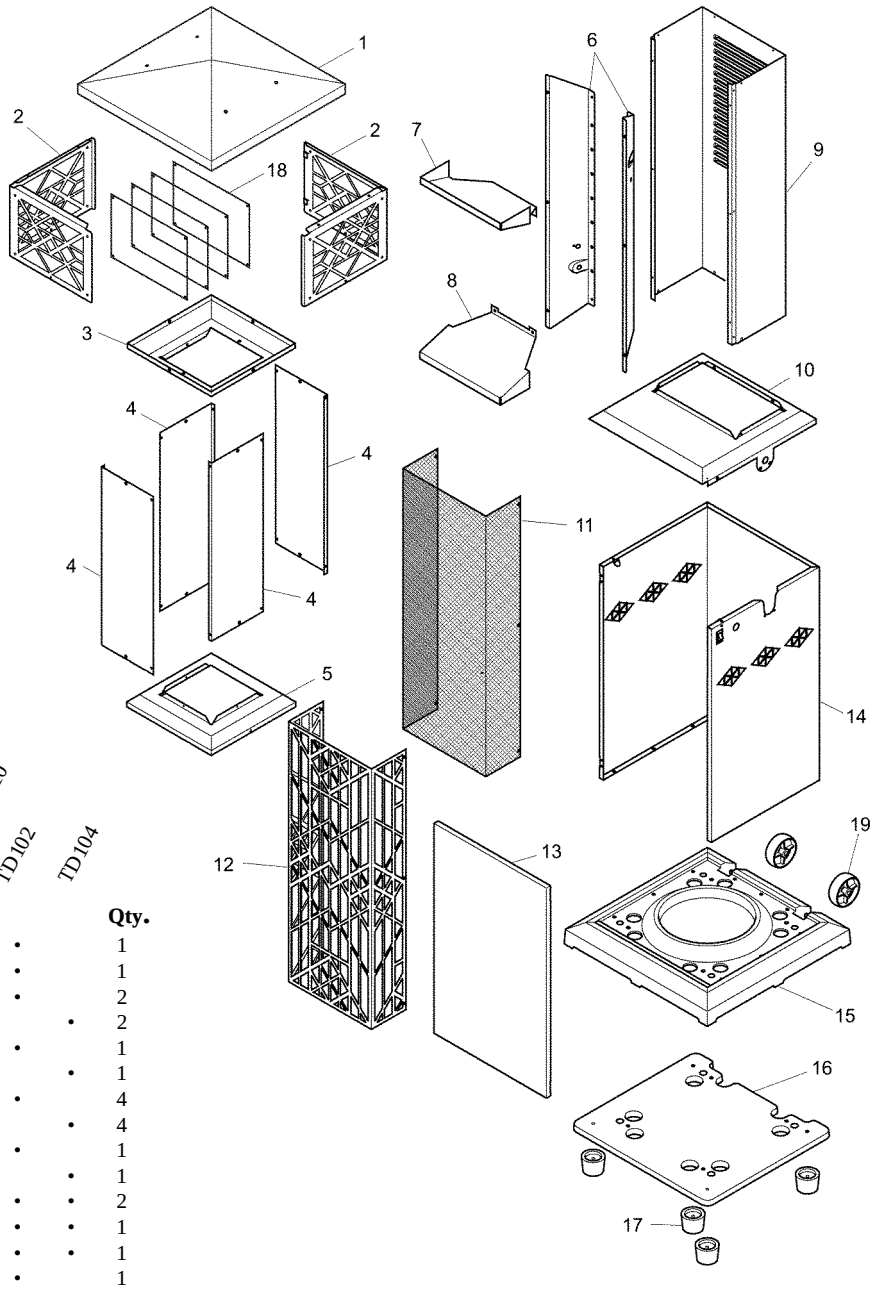
20-36,500 BTU Desa Propane Heater

Model Numbers
TD100
TD102
TD104
TD110



Key No.	Part No.	Description	TD100, TD110	TD102	TD104	Qty.
1	118890-01	Lightpost Top Cap		•		1
	118890-02	Lightpost Top Cap	•	•		1
2	118891-01	Deco Light Shroud, Mission	•	•		2
	118891-02	Deco Light Shroud, Ornate			•	2
3	118892-01	Lightpost Top		•		1
	118892-02	Lightpost Top	•		•	1
4	118885-01	Lightpost Panel		•		4
	118885-02	Lightpost Panel	•		•	4
5	118884-01	Lower Burner Housing Top		•		1
	118884-02	Lower Burner Housing Top	•		•	1
6	118887-01	Reflector Right/Left	•	•	•	2
7	118888-01	Reflector Top	•	•	•	1
8	118889-01	Reflector Bottom	•	•	•	1
9	118883-01	Lower Burner Housing		•		1
	118883-02	Lower Burner Housing	•		•	1
10	118882-01	Cabinet Base Top		•		1
	118882-02	Cabinet Base Top	•		•	1
11	119004-01	Lower Screen	•	•	•	1
12	118900-01	Front Lower Burner Grate, Mission	•	•		1
	118900-02	Front Lower Burner Grate, Ornate			•	1
13	118905-01	Base Cabinet Door		•		1
	118905-02	Base Cabinet Door	•		•	1
14	118881-01	Cabinet Base		•		1
	118881-02	Cabinet Base	•		•	1
15	118899-01	Lightpost Base	•	•	•	1
16	118901-01	Lightpost Base Weight	•	•	•	1
17	118902-01	Base Foot	•	•	•	4
18	119005-01	Upper Screen	•	•	•	4
19	118849-01	Wheel	•	•	•	2
*	119423-01	Accessory Cover (not shown)			•	1

*Available as accessory for models TD100, TD10 and TD110.

PARTS AVAILABLE - NOT SHOWN

119111-01	Hardware Blister Pack
119093-01	Regulator and Hose Assembly
103158-01	Magnetic Door Catch
119110-01	Propane Tank Retention Chain
120574-01	Retention Hook
118990-02	Control Position Decal, English
118990-04	Control Position Decal, Eng/Spn/Frn
118988-02	Warning Decal
118989-02	Model Data Decal
100639-13	Caution Decal
119297-01	Regulator Label

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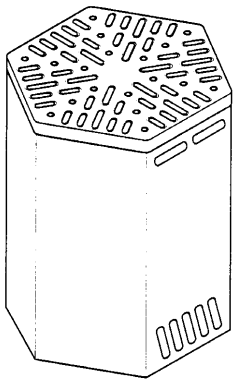
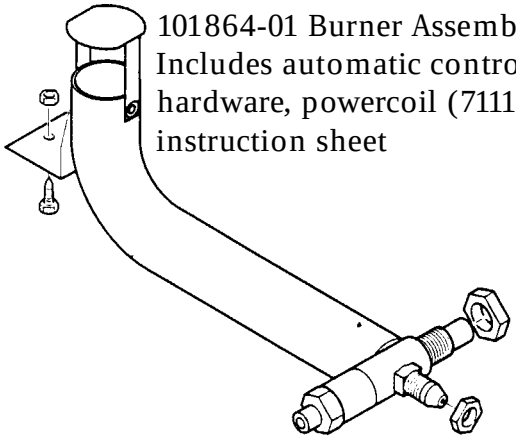
15-25,000 BTU Convection Desa Propane Heater

Model Numbers

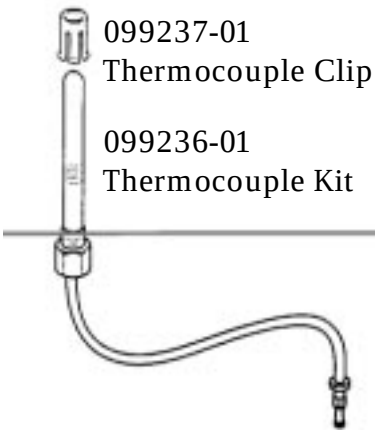
Reddy	Master
RCP25	TC25



101880-01 Shell Assembly



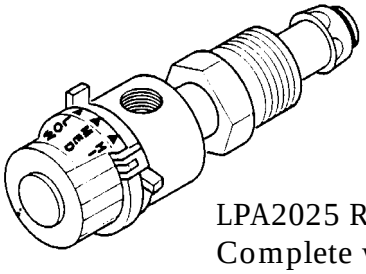
101864-01 Burner Assembly Kit
Includes automatic control valve, hardware, powercoil (7111NR) and instruction sheet



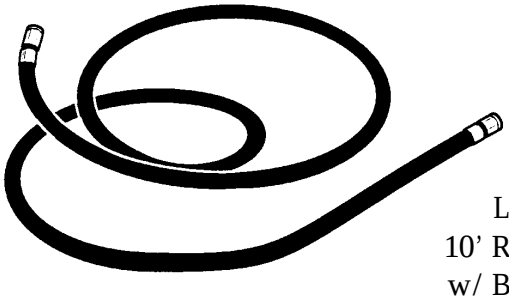
099237-01
Thermocouple Clip

099236-01
Thermocouple Kit

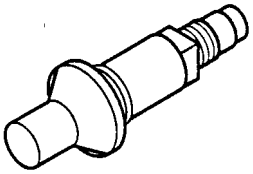
Note: Screws are standard hardware items



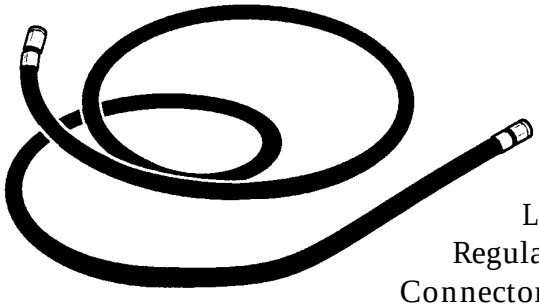
LPA2025 Regulator
Complete with regulator and fuel gas connector



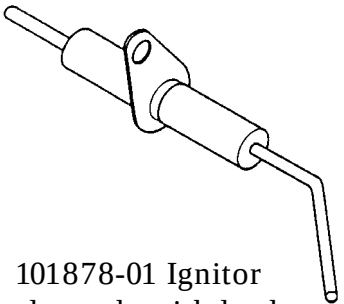
LPA1025
10' Rubber hose
w/ Brass Fitting



102445-01 Piezo Ignitor
Includes nut



LPA3025
Regulator/Fuel Gas
Connector/Hose Assembly



101878-01 Ignitor
electrode with lead

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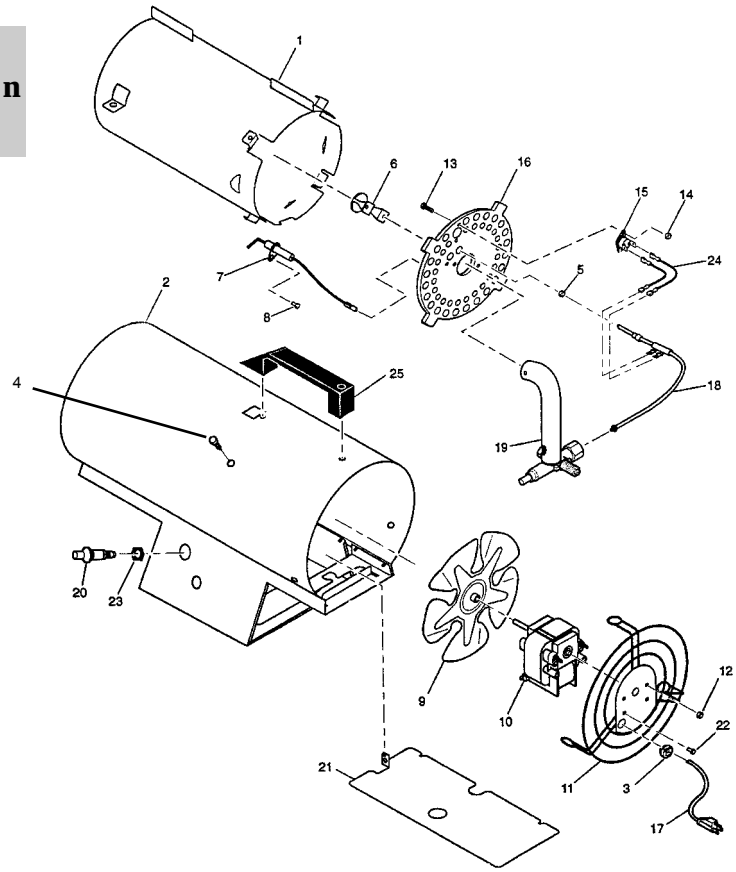
30,000 BTU Forced Air Desa Propane Heater

Model Numbers		
Reddy	**Master**	**Remington**
RLP30	BLP30	REM30LP



Key No.	Part Number	Description
1	104154-01	Combustion Chamber
2	104152-01	Unichassis
3	M11143-1	Bushing, Strain Relief
4	M11084-27	Screw (qty. 5)
5	099237-01	Thermocouple Clip (qty. 1)
6	103894-01	Target Bracket Kit
7	104162-01	Electrode Ignitor with lead
8	M11084-38	Hex Tap Screw, #8-18 x 3/8”
9	101478-02	Fan
10	104156-01	Motor Assembly
11	103863-01	Fan Guard
12	097384-02	Captive Washer Nut (qty. 2)
13	097968-05	Hex Screw, #4-40 x 1/2” (qty. 2)
14	NPC-00C	Hex Nut, #4-40 (qty. 2)
15	101732-05	Thermal Switch Kit
16	103895-01	Rear Head Kit
17	098219-17	Cord, Power Supply
18	104146-01	Thermocouple
19	104144-01	Valve/Orifice/Burner Tube Assembly
20	102445-01	Piezo Ignitor
21	104153-01	Filler Panel
22	M12461-14	Hex Screw, 8-32 x 3/8 (qty. 4)
23	102334-01	Piezo Ignitor Hex Nut
24	101480-12	Wire Assembly (qty. 2)
25	104786-01	Handle Assembly

PARTS AVAILABLE - NOT SHOWN

097647-09	Tradename Decal (BLP30) (qty. 2)
097941-26	Tradename Decal (RLP30) (qty. 2)
099596-15	Tradename Decal (REM30LP) (qty. 2)
104161-01	General Info Decal
104160-01	Operation Decal

ACCESSORIES

1591NR	Regulator & Hose Assembly
LPA1020	10’ Hose
LPA2170	Regulator
6252NR	POL Connector
2525	25’ Hose
G1851	Acme (new style) Tank Connector
TFI	Tank Stabilizer
C20	20 lb. Propane Cylinder
C40	40 lb. Propane Cylinder
7111NR	Control Valve Powercoil

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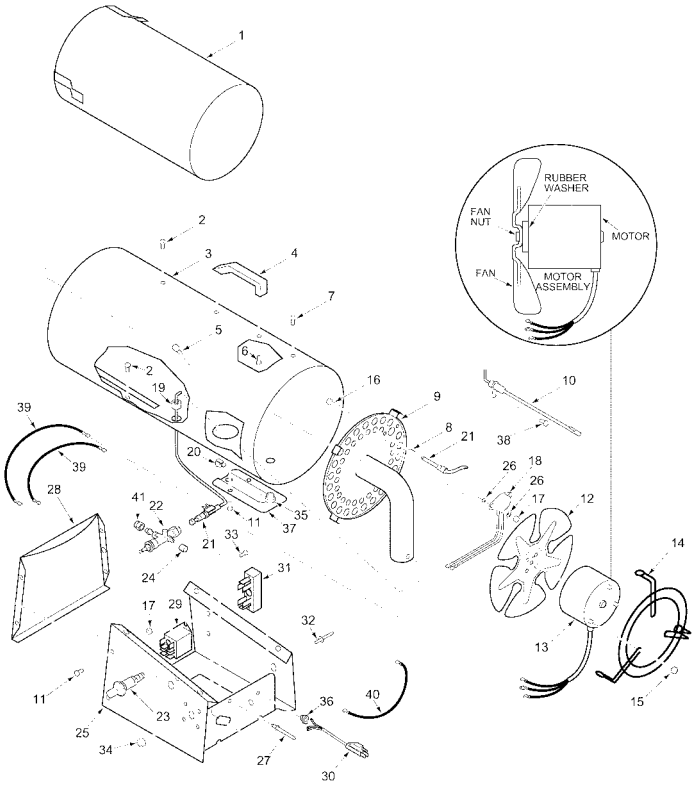
35/50,000 BTU Forced Air Desa Propane Heaters

Model Numbers

Reddy	Master	Remington
RLP35	BLP35	REM35LP
RLP50	BLP50	REM50LP
Desa	**Vanguard**	
C35LP	VLP35	
C50LP	VLP50	



Key No.	Part Number	Description
1	099568-01	Inner Shell (Combustion Chamber)
2	M11084-26	Hex Tap Screw, #10-16 x 3/8" (qty. 7)
	Outer Shell	
3	099599-01AC	REM35LP - Black
	099599-01AB	BLP35 - Yellow
	099599-01AC	RLP35 - White
	099599-01AD	RLP35,VLP35 - Green
	099599-01AC	HM35LP
	099599-01BJ	C35LP
	099599-02AA	REM50LP - Black
	099599-02AB	BLP50LP - Master
	099599-02AC	RLP50 - White
	099599-02AD	VLP50 - Green
	099599-02BJ	C50LP - Green
4	M51104-01	Handle
5	099230-01	Hex Tap Shoulder Screw (qty. 4)
6	M11084-29	Hex Tap Screw, #10-16 x 3/4" (qty. 2)
7	M11084-3	Hex Tap Screw, #12-14 x 1/2" (qty. 3)
8	099237-01	Thermocouple Clip
9	099727-01	Burner Assembly
10	099539-01	Electrode Ignitor w/lead (All 35,000 BTU units)
	100588-01	Electrode Ignitor w/lead (All 50,000 BTU units)
11	M11084-38	Hex Tap Screw, #8-18 x 3/8" (qty. 8)
12	099537-01	Fan (All 35,000 BTU models)
	099537-03	Fan (All 50,000 BTU models)
	Motor Assembly (Includes Rubber Washer & Fan Nut)	
13	099521-01	All 35,0000 BTU Models
	100589-01	All 50,000 BTU Models
14	099540-01	Fan Guard
15	097384-02	Captive Washer Nut (qty. 3)
16	097968-05	Hex Screw, #4-40 x 1/4" (qty. 2)
17	NPC-00C	Hex Nut, #4-40 (qty. 2)
18	101732-02	Thermal Switch Assembly (All 35,000 BTU Models)
	097952-09	Thermal Switch Assembly (All 50,000 BTU Models)
19	097776-01	Universal Bushing
20	099542-01	Wire Clip
21	099538-01	Thermocouple
22	099728-01	Valve/Orifice Assembly (All 35,000 BTU Models)
	100591-01	Valve/Orifice Assembly (All 50,000 BTU Models)
23	097159-01	Piezo Ignitor
24	078978-03	Sleeve Cap
25	099598-01AA	Base
26	100397-01	Lock Washer #4 (qty. 4)
27	099202-02	Steel Rivet 1/8”
28	100594-01AA	Painted Cover (50,000 BTU Models Only)
29	100184-02	Relay (50,000 BTU Models Only)
30	098219-25	Power Supply Cord Assembly (50,000 BTU Models Only)
31	099125-01	Terminal Board (50,000 BTU Models Only)
32	099157-01	Rivet (50,000 BTU Models Only)
33	097968-01	Hex Screw (qty. 2) (50,000 BTU Models Only)
34	098835-01	Hex Nut (50,000 BTU Models Only)
35	M50104-01	Shorty Bushing (50,000 BTU Models Only)
36	M11143-1	Strain Relief Bushing (50,000 BTU Models Only)
37	100596-01AB	Wire Guard (BLP50) (50,000 BTU Models Only)
	100596-01AC	Wire Guard (RLP50)(50,000 BTU Models Only)
	100596-01AA	Wire Guard (REM50LP) (50,000 BTU Models Only)
38	M11084-37	Hex Screw (50,000 BTU Models Only)
39	079010-14	Wire Assembly, Red 9 (qty. 2)
40	079010-21	Wire Assembly, White
41	099460-01	Hex Cap, 1/8-27 NPTF

ACCESSORIES

LPA3090	Regulator & Hose Assembly (All 35,000 Units)
LPA1020	10' Hose (All Models)
7111NR	Control Valve Power Coil
LPA2110	Regulator (All 35,000 BTU Models)
LPA2140	Regulator (All 50,000 BTU Models)
G1690	POL Connector
TFI	Tank Stabilizer
2525	25 Foot Hose (All Models)
G1851	Acme (new style) POL Connector
LPA3055	Regulator & Hose Assy (All 50,000 Models)

PARTS AVAILABLE - NOT SHOWN

097647-02	Tradename Decal (BLP50) Master (qty. 2)
097941-05	Tradename Decal (RLP50) Reddy (qty. 2)
079718-05	Tradename Decal (VLP50) Vanguard (qty. 2)
099596-02	Tradename Decal(REM50LP -left) Remington
099596-01	Tradename Decal(REM50LP -right) Remington
079871-02	Tradename Decal (C50LP) Desa (qty. 2)
079663-01	LP Warning Decal
099672-01	Notice Decal

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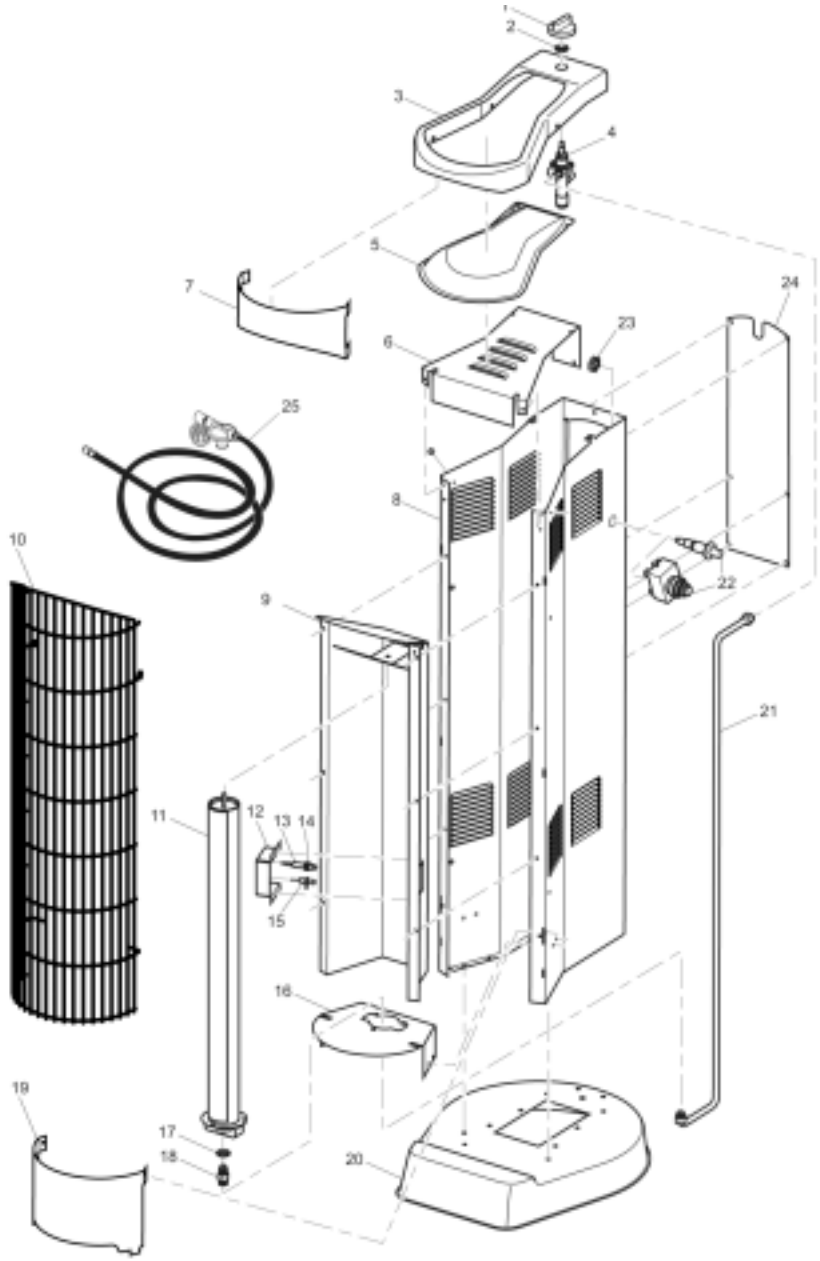
35,000 BTU Radiant Desa Propane Tower Heater

Model Numbers
PG35VPA
PL35VPA
PV35VPA
PD35VPA



Key No.	Part Number	Description
1	099393-03	Control Knob
2	098508-01	Valve Retainer Nut
3	114643-01	One Piece Top
4	113150-01	Valve
5	114644-01	Formed Top, Perf.
6	114645-01	Top Plate
7	114646-01	Top Trim, Perf.
8	114642-01	Tower Wrapper
9	114364-01	Deflector
10	114648-01	Grill
11	113609-01	Radiant Burner Tube
12	113771-01	Bracket
13	104146-04	Thermocouple
14	100898-01	Thin Hex Nut (qty. 2)
15	113534-01	Ignitor Electrode
16	113650-01	Burner Bracket
17	NJF 8C	Nozzle Nut
18	113149-01	Nozzle
19	114649-01	Bottom Trim
20	114650-01	Drawn Base
21	114651-01	Burner Inlet Tube
22	102445-01	Piezo Ignitor
	104784-01	Electronic Ignitor
23	102334-01	Nut, Palnut
24	114652-01	Back Cover
25	107392-01	Hose and Regulator Assembly

PARTS AVAILABLE-NOT SHOWN

113532-01	Operation Decal
113533-01	Warning Decal
113535-01	Control Position Decal
113537-01	Tradename Decal PG35VPA
113537-02	Tradename Decal PL35VPA
113537-03	Tradename Decal PV35VPA
113537-04	Tradename Decal PD35VPA
113972-01	Rating Label

Screws Are Standard Hardware Items

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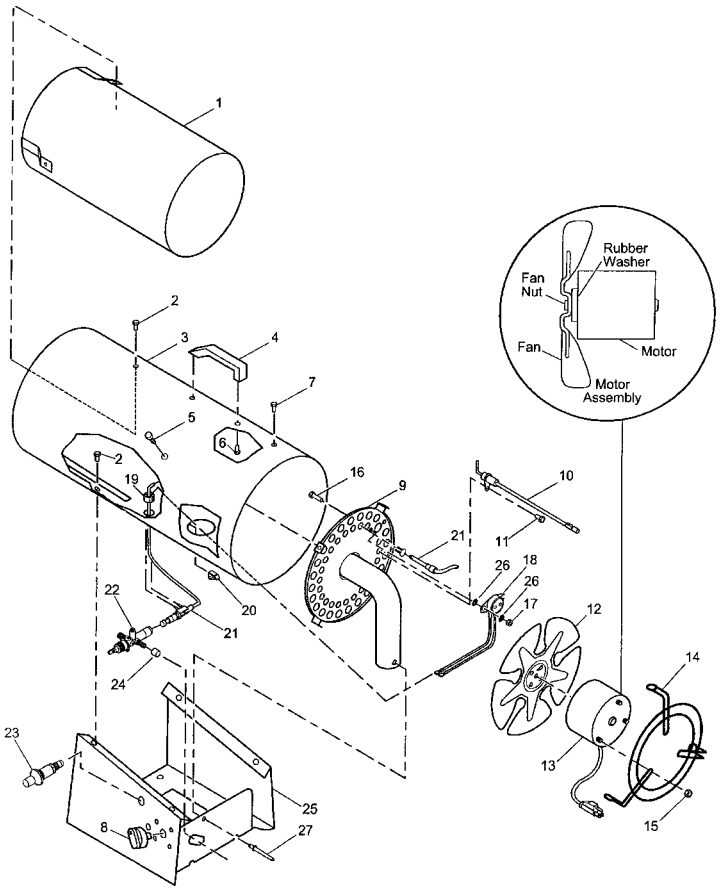
50,000 BTU Forced Air Desa Propane Heater

Model Numbers

Reddy	Master	Remington
RLP50V	BLP50V	REM50PV

Key No.	Part Number	Description
1	099568-01	Inner Shell (Combustion Chamber)
2	M11084-26	Hex Tap Screw, #10-16 x 3/8" (qty. 7)
3	**Outer Shell**	
	099599-01AB	Outer Shell (BLP50V)
	099599-01AA	Outer Shell (REM50PV)
	099599-01AC	Outer Shell (RLP50V)
4	M51104-01	Handle
5	099230-01	Hex Tap Shoulder Screw (qty. 4)
6	M11084-29	Hex Tap Screw, #10-16 x 3/4" (qty. 2)
7	M11084-27	Hex Tap Screw, #12-14 x 1/2" (qty. 3)
8	099393-03	Knob, Control
9	103931-01	Burner Assembly
10	099539-01	Electrode Ignitor with lead
11	M11084-38	Hex tap Screw, #8-18 x 3/8"
12	099537-03	Fan
13	103864-01	Motor Assy (Includes Rubber Washer & Fan Nut)
14	099540-01	Fan Guard
15	097384-02	Captive Washer Nut (qty. 3)
16	097968-05	Hex Screw, #4-40 x 1/2" (qty. 2)
17	NPC-00C	Hex Nut, #4-40 (qty. 2)
18	101481-05	Thermal Switch Kit
19	097776-01	Universal Bushing
20	099542-01	Wire Clip
21	103919-01	Thermocouple Kit
22	103921-01	Valve/Orifice Assembly
23	102445-01	Piezo Ignitor with nut
24	078978-03	Sleeve Cap
25	103922-01	Base Assembly
26	100397-01	Lock Washer #4 (qty. 4)
27	099202-02	Steel Rivet, 1/8"
PARTS AVAILABLE - NOT SHOWN		
	097941-18	Tradename Decal (RLP50V) (qty. 2)
	097647-07	Tradename Decal (BLP50V) (qty. 2)
	099596-11	Tradename Decal (REM50PV)
	099596-12	Tradename Decal (REM50PV)
	103867-01	General Information Decal
	103869-01	Operation Decal
	079663-01	LP Warning Decal
	099672-01	Notice Decal
ACCESSORIES		
	LPA3055	Regulator & Hose Assembly
	LPA1020	10' Hose
	LPA2140	Regulator
	LPA4020	Fuel Gas Connector
	2525	25 Foot Hose (All Models)
	G1851	Acme (new style) Tank Connector
	C20	20 lb. Propane Cylinder
	C40	40 lb. Propane Cylinder
	TF1	Propane Tank Stabilizer



SPECIFICATIONS

Output Rating	30-50,000 BTU/Hr	Hot Air Output	275 CFM
Fuel	Propane Vapor	Motor	3300 RPM
Fuel Consumption	2.19 GPH	Amperage	2
Supply Pressure to Regulator		Ignition	Piezo
Min. (for input adjustment)	10 PSI		
Max.	200 PSI		

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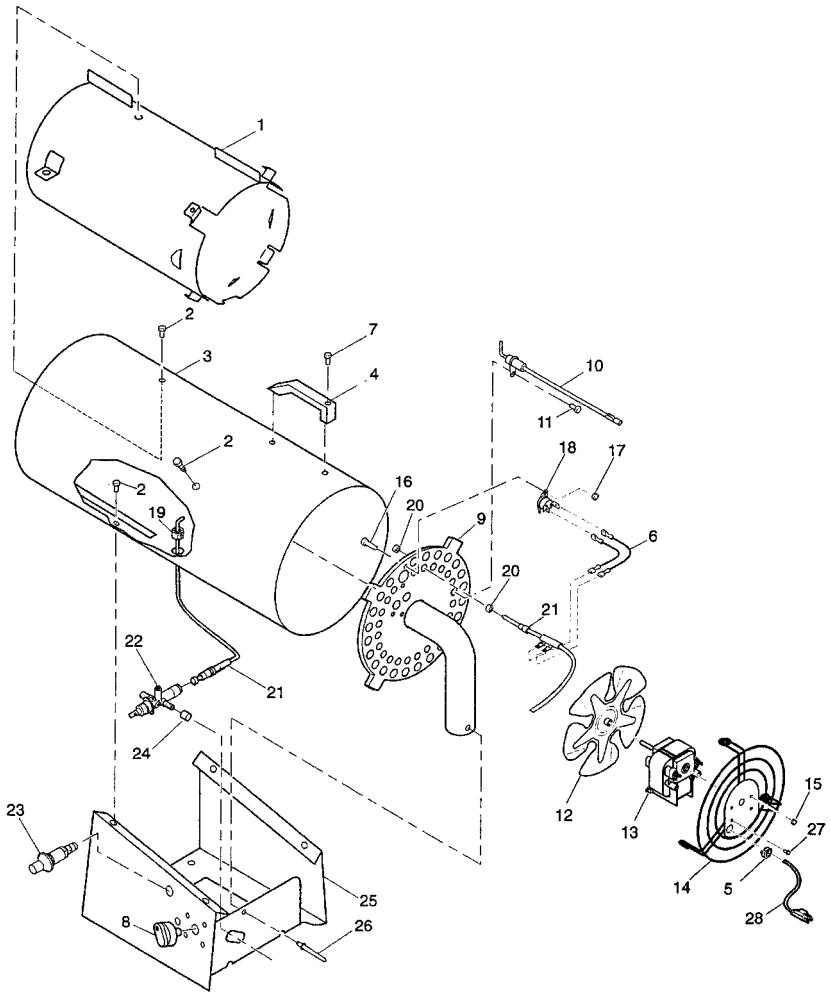
50,000 BTU Forced Air Desa Propane Heater

Model Numbers

Reddy
RLP50VA

Master
BLP50VA

Remington
REM50PVA



Key No.	Part Number	Description
1	104154-01	Combustion Chamber
2	M11084-26	Hex Tap Screw, #10-16 x 3/8" (qty. 7)
3	**Outer Shell**	
	105333-03AB	Outer Shell (BLP50VA)
	105333-02	Outer Shell (REM50PVA)
	105333-01	Outer Shell (RLP50VA)
4	104786-01	Handle Kit
5	M11143-1	Bushing Strain Relief
6	101480-12	Wire Assembly (qty. 2)
7	M11084-27	Hex Tap Screw, #12-14 x 1/2" (qty. 3)
8	099393-03	Control Knob
9	105341-01	Burner Assembly
10	099539-01	Electrode Ignitor with lead
11	M11084-38	Hex Tap Screw, #8-18 x 3/8"
12	101478-03	Fan
13	105332-01	Motor
14	103863-01	Fan Guard
15	097384-02	Captive Washer Nut (qty. 3)
16	097968-05	Hex Screw, #4-40 x 1/2" (qty. 2)
17	NPC-00C	Hex Nut, #4-40 (qty. 2)
18	101481-04	Thermal Switch
19	097776-01	Universal Bushing
20	099237-01	Thermocouple Clip (qty. 2)
21	104146-01	Thermocouple
22	103921-01	Valve/Orifice Assembly

Key No.	Part Number	Description
23	102445-01	Piezo Ignitor
24	078978-03	Sleeve Cap
25	105335-01	Base Assembly
26	099202-02	Steel Rivet, 1/8"
27	M12461-14	Hex Screw, 8-32 x 3/8 (qty. 2)
28	098219-25	Cord, Power Supply
PARTS AVAILABLE - NOT SHOWN		
	097941-28	Tradename Decal (RLP50VA)(qty. 2)
	097647-10	Tradename Decal (BLP50VA)(qty. 2)
	099596-16	Tradename Decal (REM50PVA)(qty. 2)
	103867-05	General Information Decal
	103869-03	Operation Decal
	099672-01	Notice Decal
ACCESSORIES		
	LPA3055	Regulator & Hose Assembly
	LPA4020	Fuel Gas Connector
	LPA2140	Regulator Only
	LPA1020	1/4" x 10' Hose
	2525	1/4" x 25' Hose
	G1851	Acme (new style) Tank Connector
	C20	20 lb. Propane Cylinder
	C40	40 lb. Propane Cylinder
	7111NR	Control Valve Powercoil

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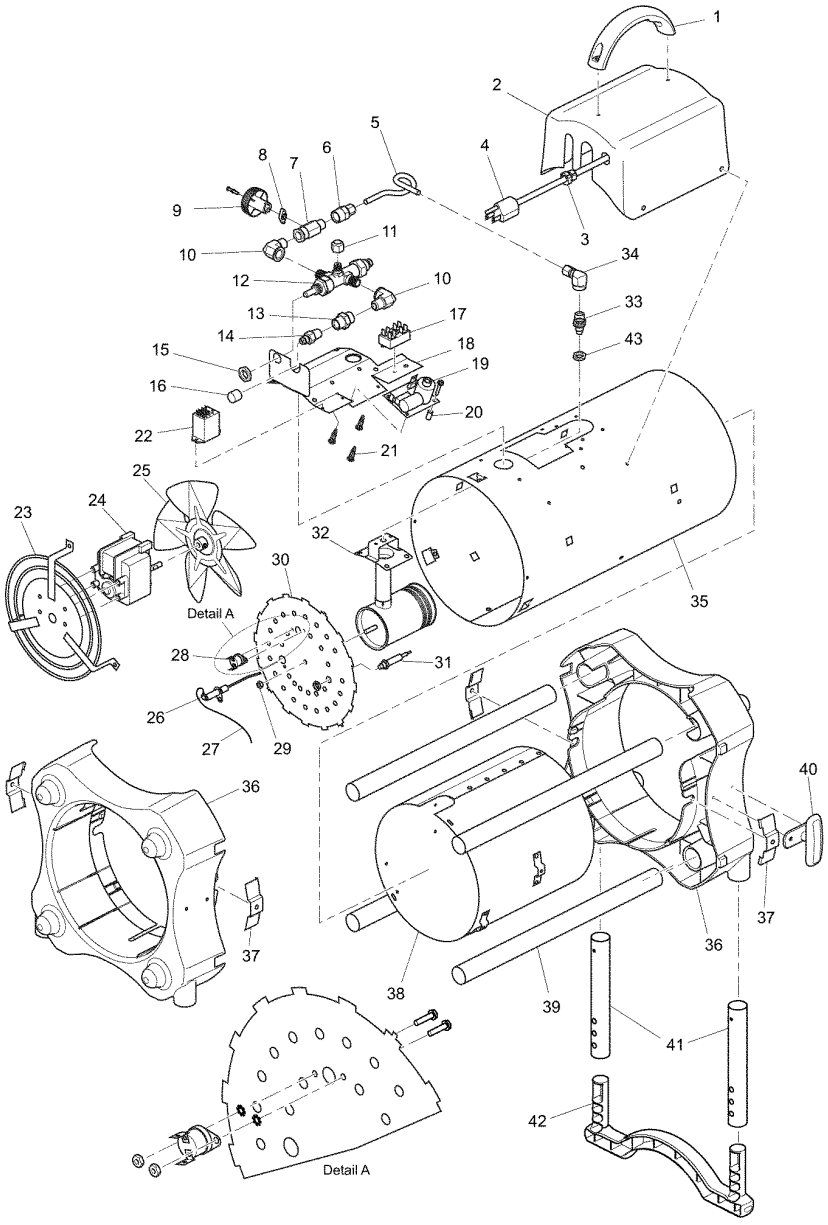
55,000 BTU Forced Air Desa Propane Heater

Model Numbers

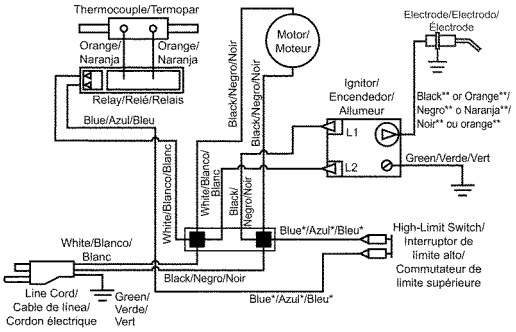
TB100	TB104
TB106	TB110

Key No.	Part No.	Description
1	118476-01	Handle
2	118472-01	Control Box
3	M11143-2	Strain Relief Bushing
4	098219-42	Power Supply Cord Assembly
5	100145-03	Fuel Tube
6	118796-01	Female Compression Fitting
7	114159-05	Ball Valve Assembly
8	113810-01	Ball Valve Knob Insert
9	118773-01	Ball Valve Knob
10	113870-01	Elbow Fitting qty. 2
11	116981-01	Female Cap Fitting
12	113871-01	Control Valve
13	113869-01	Coupling Fitting
14	097809-04	Male Fitting
15	113794-01	Valve Nut
16	078978-03	Cap Sleeve
17	119401-01	Terminal Block
18	118506-01	Heat Shield
19	113867-01	Hi-Lo Mini Ignitor
20	114150-01	Steel Spacer
21	118802-01	Printed Circuit Board Support qty. 3
22	113875-02	Relay Assembly
23	118780-01	Motor Grill Assembly
24	113880-02	Motor Assembly
25	113881-01	Fan
26	097805-04	Ignitor
27	097806-03	Ignitor Cable
28	101481-12	Thermal Limit Switch
29	098249-01	Nut
30	118497-02	Rear Plate
31	104146-05	Thermocouple
32	118514-01	Burner Assembly
33	118685-01	Injector
34	100146-01	Female Elbow
35	119496-01	Shell (Black)
36	118471-01	End Cap • • • •
37	119459-01	Hold Down Bracket qty. 4
38	119497-01	Combustion Chamber
39	118477-03	Steel Tube qty. 4
40	118475-01	Cord Cleat qty. 2
41	118478-03	Foot Leg qty. 2
42	118474-01	Foot
43	119631-01	Nut



Parts available - not Shown

M9900-199	Wire Assembly, Black
M9900-200	Wire Assembly, White
101480-14	Wire Assembly, Blue
118774-04	Hose and Regulator Assembly
118687-03	Operation Decal
119144-01	Model Data Decal
119146-01	Wiring Decal



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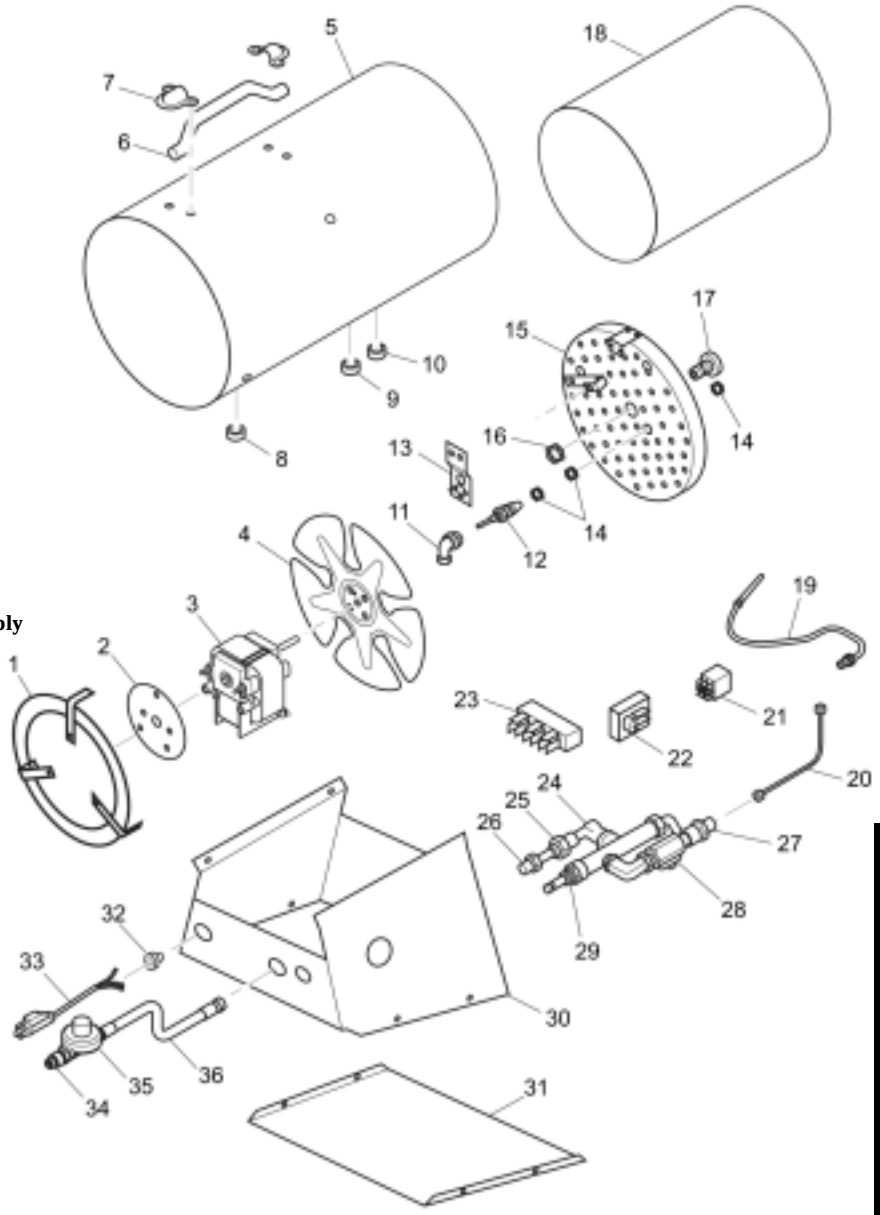
55,000 BTU Forced Air Desa Propane Heater

Model Numbers

BLP55V REM55PV
RLP55V

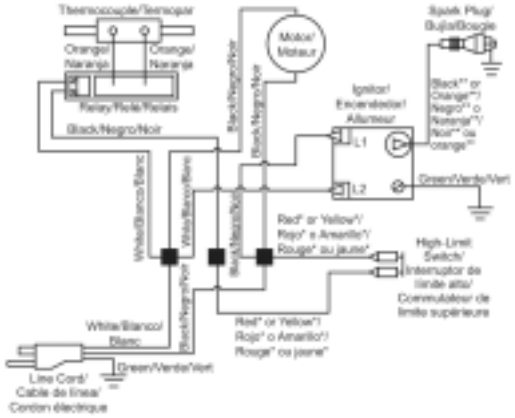
Key No.	Part No.	Description
1	113878-01	Grille Assembly
2	115772-01	Motor Mounting Bracket
3	113880-01	Motor Assembly
4	113881-01	Fan
5	113882-01	Outer Cylinder, Red
	113882-02	Outer Cylinder, Orange
	113882-03	Outer Cylinder, Yellow
	113882-04	Outer Cylinder, Black
6	097917-01	Handle
7	097918-01	Clip Handle Mounting qty. 2
8	113883-01	Snap Bushing, 5/8
9	118651-01	Universal Bushing
10	114162-01	Snap Bushing, 1/2
11	113887-01	Male Elbow Fitting
12	113885-01	Spark Plug
13	113889-01	High Limit Switch Control Assembly
14	113886-01	Nut, Spark Plug qty. 2
15	113892-01	Flame Holder Assembly
16	113888-01	Nut orifice Mounting
17	113890-01	Orifice, LP Assembly
18	**	Middle Cylinder Assembly
19	113884-01	Thermocouple
20	113877-01	Fuel Tube Assembly
21	113875-01	Relay Assembly
22	113867-01	Ignitor
23	113872-01	Terminal Board
24	113870-01	Elbow Street Fitting qty. 2
25	113869-01	Coupling Fitting qty. 2
26	113868-01	Male Connector Fitting
27	113876-01	Female Connector Fitting
28	113873-01	Ball Valve
29	113871-01	Valve
30	113866-01	Control Box Assembly
31	113863-01	Bottom Panel
32	113865-01	Strain Relief Bushing
33	113864-01	Power Cord
34	113791-01	POL Excess Flow 1/4 MPT
35	113862-01	Regulator, 28" W.C.
36	113776-01	Hose Assembly, LP



PARTS AVAILABLE - NOT SHOWN

113909-01	Wiring Decal
113802-18	Model Data Decal
113933-07	Operating Instructions Decal, English/Spanish
113984-07	Warning Decal, English
113858-01	Tradename Decal, All-Pro
113858-02	Tradename Decal, Universal
097650-01	Tradename Decal, Master
109111-02	Tradename Decal, Reddy
110789-01	Tradename Decal, Remington
113914-01	Hang Tag, English
113927-01	Fan Label

**** Not a field replaceable part.**



Desa LP 55,000 BTU

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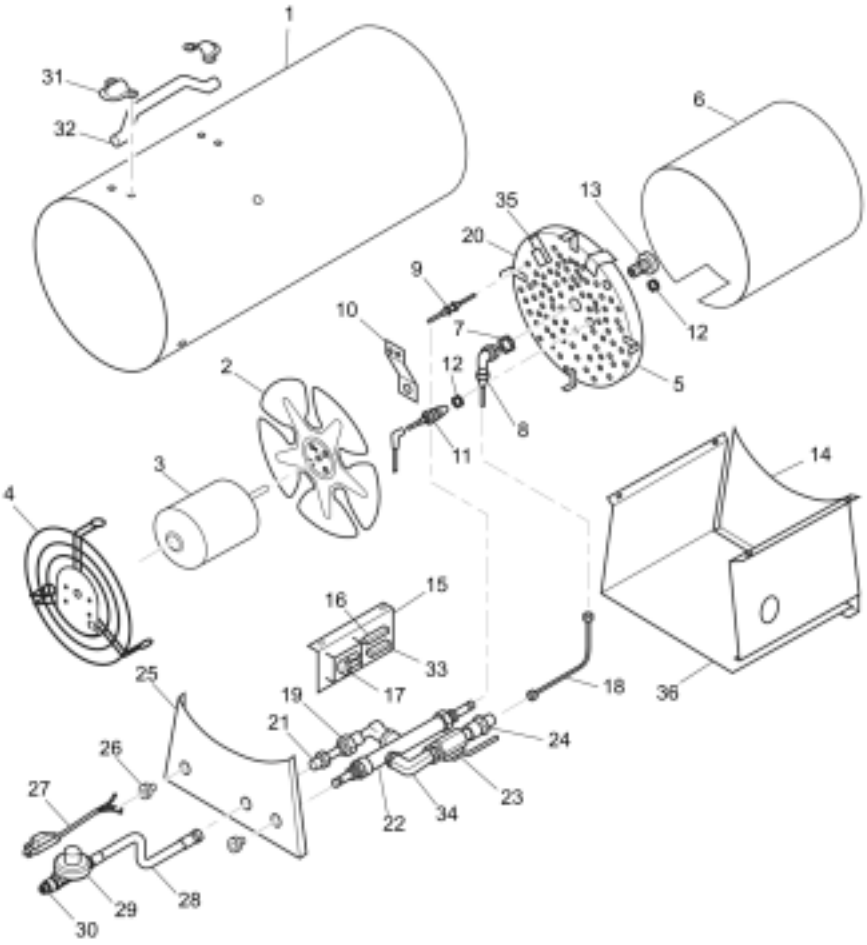
85,000 BTU Forced Air Desa Propane Heater

Model Numbers

BLP85V REM85PV
RLP85V

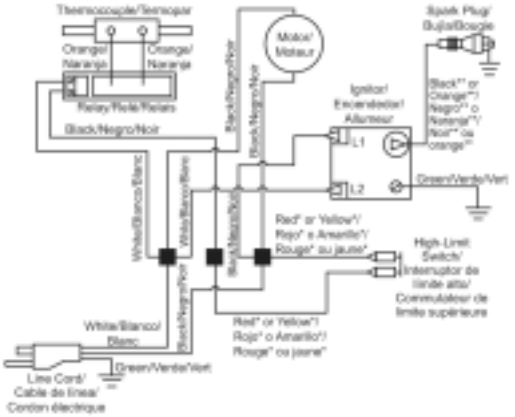


Key No.	Part No.	Description
1	113918-01	Outer Cylinder Assembly, Orange
	113918-02	Outer Cylinder Assembly, Red
	113918-03	Outer Cylinder Assembly, Yellow
	113918-04	Outer Cylinder Assembly, Black
2	113881-01	Fan
3	113860-01	Motor Assembly
4	113919-01	Motor Grill
5	113922-01	Flame Holder Assembly
6	**	Middle Cylinder Assembly
7	113888-01	Nut orifice Mounting 3/4-16
8	113931-01	Male Elbow Fitting
9	113884-01	Thermocouple
10	113889-01	High Limit Control Assembly
11	113885-02	Spark Plug, 1/8 Gap
12	113886-01	Nut-Spark Plug qty. 3
13	113920-01	Orifice Assembly
14	113935-01	Control Box Assembly
15	113924-01	Ignition Relay Bracket
16	113872-01	Terminal Board
17	113867-01	Spark Ignition, 115V
18	113917-01	Fuel Tube Assembly
19	113869-01	Fitting, Coupling
20	113936-01	Spacer, TC Bracket
21	113868-01	Fitting, Male Connector
22	113871-01	Valve
23	113928-01	Ball Valve, Variable Rate
24	113929-01	Female Connector Fitting
25	113925-01	Control Panel Assembly
26	113865-01	Strain Relief Bushing
27	113864-01	Power Cord
28	113776-01	Hose Assembly
29	113862-01	Regulator, 28" W.C. (6.97 kPa)
30	113791-01	POL Excess Flow
31	097918-01	Clip Handle Mounting qty. 2
32	097917-01	Handle
33	113875-01	Relay
34	113870-01	Fitting, Elbow qty. 2
35	113923-01	racket, TC
36	113926-01	Access Panel

PARTS AVAILABLE - NOT SHOWN

113909-01	Wiring Decal
113802-05	Model Data Decal
113933-02	Operating Instructions Decal, English/Spanish
113984-01	Warning Decal, English
113915-01	Tradename Decal, All-Pro
113908-01	Tradename Decal, Universal
109111-02	Tradename Decal, Reddy
097650-01	Tradename Decal, Master
110789-01	Tradename Decal, Remington
113914-01	Hang Tag, English
113927-01	Fan Label

**** Not a field replaceable part.**



Desa LP 85,000 BTU

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85,000 BTU Forced Air Desa Propane Heater

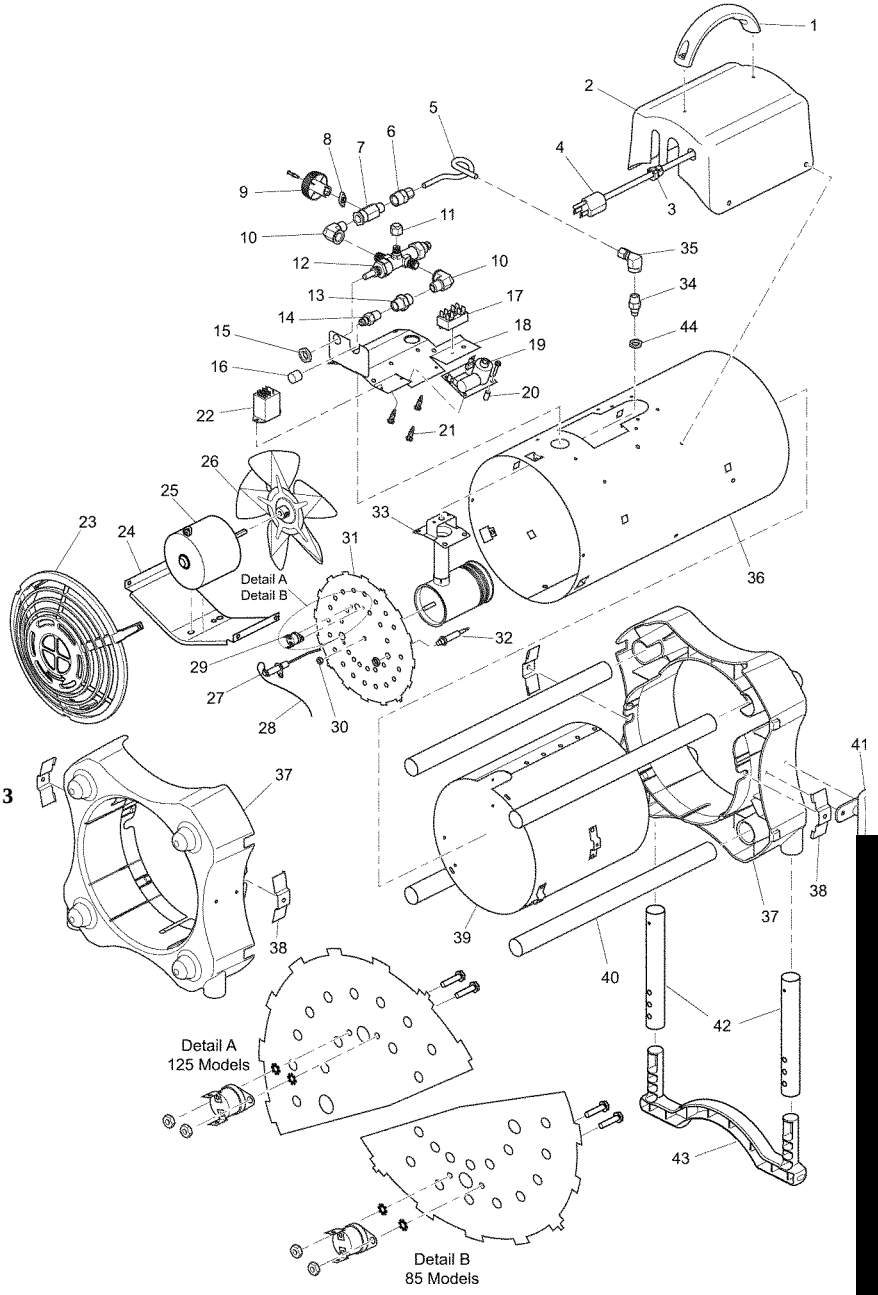
Model Numbers

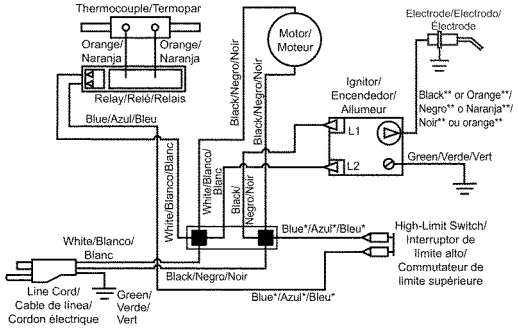
TB102 TB111
TB114

Key No.	Part No.	Description
1	118476-01	Handle
2	118472-01	Control Box
3	M11143-2	Strain Relief Bushing
4	098219-42	Power Supply Cord Assembly
5	100145-03	Fuel Tube
6	118796-01	Female Compression Fitting
7	114159-05	Ball Valve Assembly
8	113810-01	Ball Valve Knob Insert
9	118773-01	Ball Valve Knob
10	113870-01	Elbow Fitting qty. 2
11	116981-01	Female Cap Fitting
12	113871-01	Control Valve
13	113869-01	Coupling Fitting
14	097809-04	Male Fitting
15	113794-01	Valve Nut
16	078978-03	Sleeve Cap
17	119401-01	Terminal Block
18	118506-01	Heat Shield
19	113867-01	Hi-Lo Mini Ignitor
20	114150-01	Steel Spacer
21	118802-01	Printed Circuit Board Support qty. 3
22	113875-02	Relay Assembly
23	118473-01	Fan Guard
24	118482-01	Motor Mount
25	113860-02	Motor Assembly
26	113881-01	Fan 7"
27	097805-04	Ignitor
28	097806-03	Ignitor Cable
29	101481-04	Thermal Limit Switch
30	098249-01	Nut
31	118497-03	Rear Plate
32	104146-05	Thermocouple
33	118514-01	Burner Assembly
34	118685-02	Injector
35	100146-01	Female Elbow
36	119496-02	Shell (Black)
37	118471-01	End Cap qty. 2
38	119459-01	Hold Down Bracket qty. 4
39	119497-02	Combustion Chamber
40	118477-01	Steel Tube qty. 4
41	118475-01	Cord Cleat qty. 2
42	118478-01	Foot Leg qty. 2
43	118474-01	Foot
44	119631-01	Nut

Parts available - not shown

M9900-199	Wire Assembly, Black
M9900- 00	Wire Assembly, White
101480-14	Wire Assembly, Blue
118774-01	Hose and Regulator Assembly
118687-03	Operation Decal
119144-02	Model Data Decal
119146-01	Wiring Decal





Desa LP 85,000 BTU

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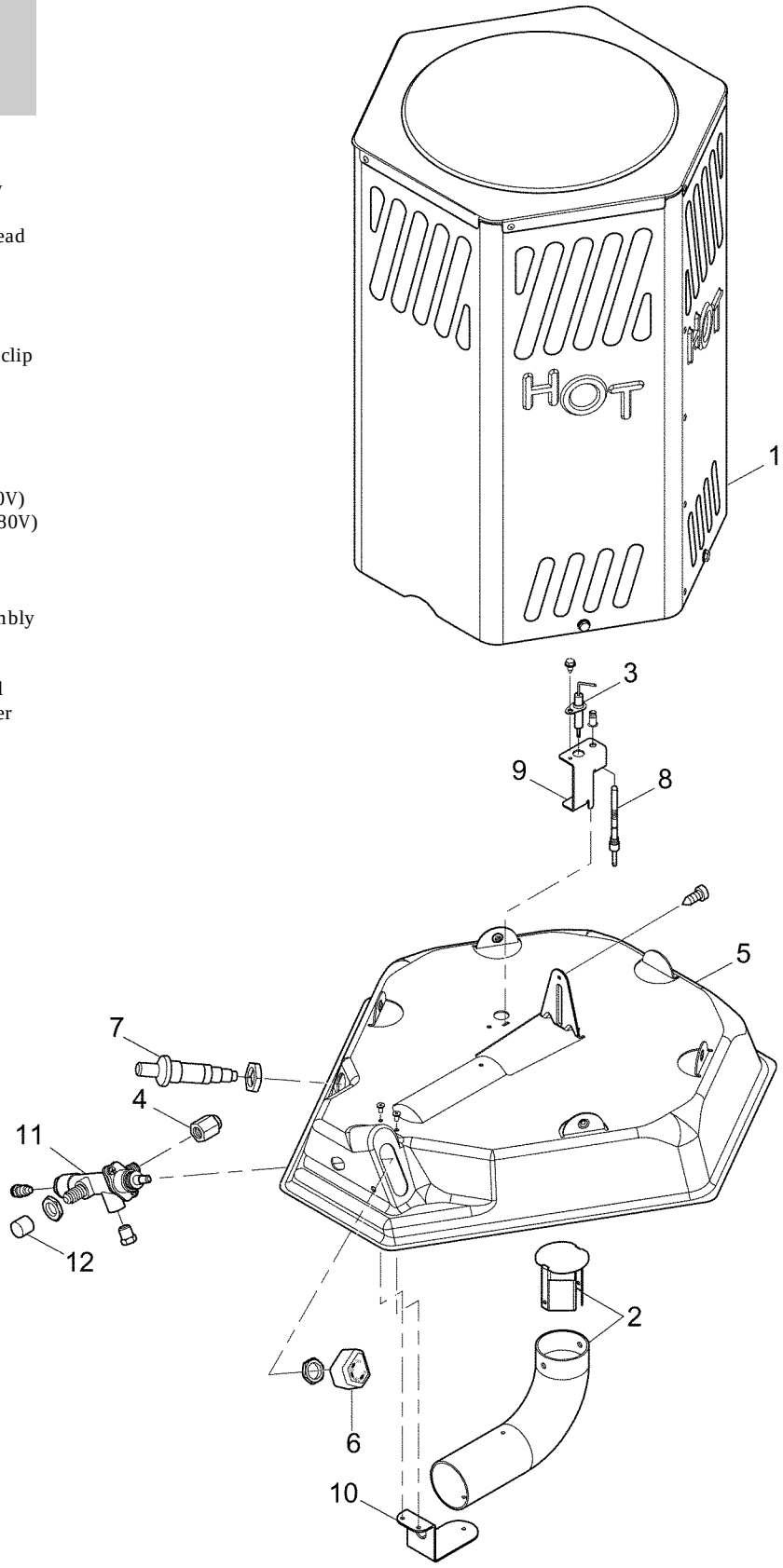
80,000 BTU Convection Desa Propane Heater

Model Numbers

Reddy	Master
RCP80V	TC80V

Key No.	Part Number	Description
1	103928-01	Top and Shell Assembly
2	103929-01	Burner Assembly
3	103904-01	Ignitor Electrode with lead
4	103032-01	Nozzle
5	103031-01	Base
6	103036-01	Stealth Knob
7	102445-01	Piezo Ignitor with nut
8	099236-01	Thermocouple Kit with clip
9	103854-01	Thermocouple Bracket
10	103037-01	Nozzle Locator
11	103930-01	Valve Assembly
12	078978-03	Cap Sleeve
PARTS AVAILABLE - NOT SHOWN		
	098853-06	Tradename Decal (TC80V)
	098851-05	Tradename Decal (RCP80V)
	099681-03	Information Decal
	099683-02	Operation Decal
ACCESSORIES		
	LPA3110	Regulator & Hose Assembly
	LPA2160	Regulator
	LPA4020	POL Connector
	7111NR	Control Valve Powercoil
	C100	100 lb. Propane Cylinder
	LPA1020	10' Hose
	2525	25' Hose
	099237-01	Thermocouple Clip
	7161NR	Piezo Igniter Nut

Screws Are Standard Hardware Items



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100,000 BTU Forced Air Desa Propane Heater

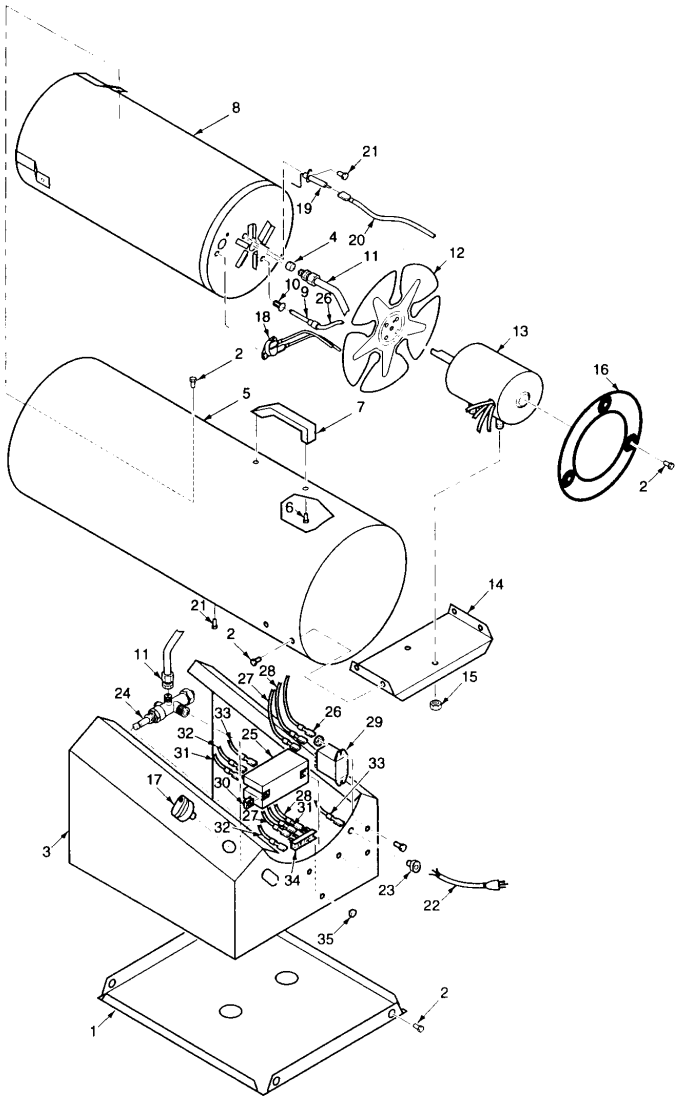
Model Numbers

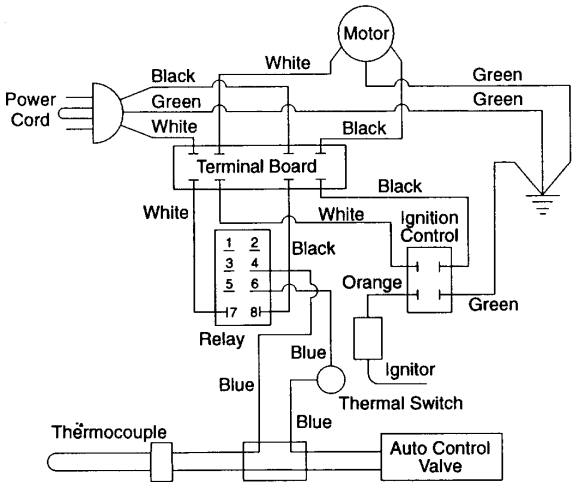
Reddy	Remington	Master
RLP100	REM100LP	BLP100

Key No.	Part Number	Description
1	102362-01	Base Tray
2	M11084-26	Hex TPG Screw (qty. 15)
3	102361-01AA	Base
4	099138-02	Nozzle
5	098511-216	Shell Kit
6	M11084-29	Screw (qty. 2)
7	M51104-01	Handle
8	098512-61	Combustion Chamber Kit
9	099538-01	Thermocouple
10	099237-01	Thermocouple Clip
11	099334-02	Fuel Tube Kit
12	M51153-01	Fan
13	102366-01	Motor
14	102380-01	Motor Bracket
15	NTC-4C	Hex Lock Nut (qty. 2)
16	102315-02	Fan Guard
17	099393-03	Control Knob
18	101732-04	Thermal Switch Kit
19	102487-01	Ignitor Electrode
20	097806-02	Ignitor Cable
21	M11084-38	Screw (qty. 2)
22	098219-17	Power Cord
23	M11143-1	Strain Relief Bushing
24	103846-01	Valve Kit
25	102601-01	Ignition Control
26	079010-30	Wire Assembly (Relay)
27	079010-19	Wire Assembly (Relay)
28	097951-14	Wire Assembly (Relay)
29	103847-01	Relay Kit
30	102602-01	U-Clip Nut (qty. 2)
31	097951-13	Wire Assembly (Ignition Ctrl)
32	M16841-56	Wire Assembly (Ignition Ctrl)
33	M16841-68	Wire Assembly (Ignition Ctrl)
34	099125-11	Terminal Board
35	099157-01	Rivet

PARTS AVAILABLE - NOT SHOWN

102370-01	Owners Manual
079231-01	Service Center List
097940-06	Tradename Decal (BLP100)
097941-17	Tradename Decal (RLP100)
099596-09	Tradename Decal (REM100LP)
099596-10	Tradename Decal (REM100LP)
102600-01	Operation Decal
102604-01	General Information Decal
102599-01	Electrical Decal
LPA3100	Regulator & Hose Assy
LPA1000	10' Hose
LPA2150	Regulator
LPA4020	Fuel Gas Connector
3825	25' Hose
C100	100 lb. Propane Cylinder
7111NR	Control Valve Powercoil





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125,000 BTU Forced Air Desa Propane Heater

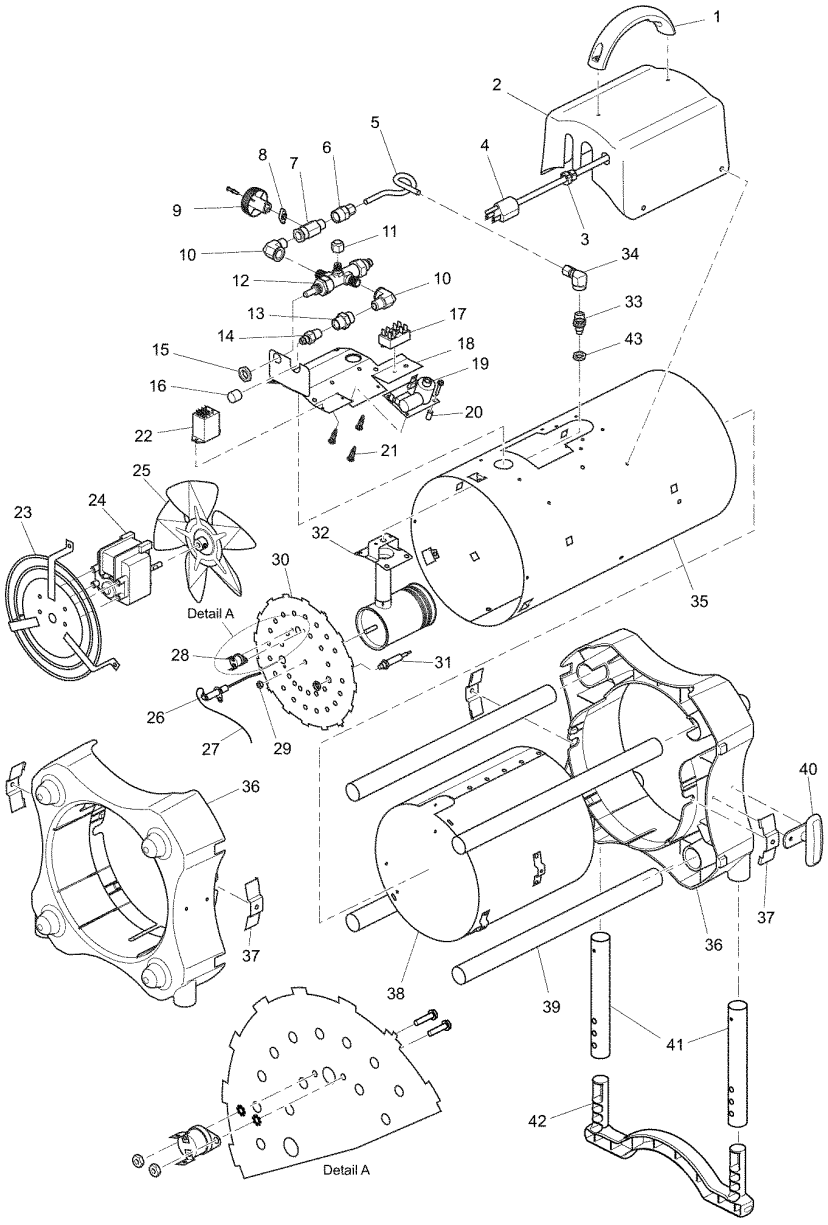
Model Numbers

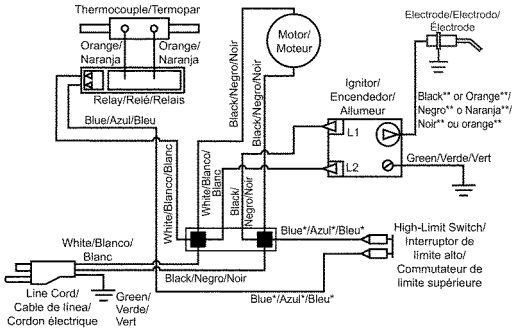
TB101	TB105
TB107	TB112

Key No.	Part No.	Description
1	118476-01	Handle
2	118472-01	Control Box
3	M11143-2	Strain Relief Bushing
4	098219-42	Power Supply Cord Assembly
5	100145-03	Fuel Tube
6	118796-01	Female Compression Fitting
7	114159-03	Ball Valve Assembly
8	113810-01	Ball Valve Knob Insert
9	118773-01	Ball Valve Knob
10	113870-01	Elbow Fitting qty. 2
11	116981-01	Female Cap Fitting
12	113871-01	Control Valve
13	113869-01	Coupling Fitting
14	097809-04	Male Fitting
15	113794-01	Valve Nut
16	078978-03	Sleeve Cap
17	119401-01	Terminal Block
18	118506-01	Heat Shield
19	113867-01	Hi-Lo Mini Ignitor
20	114150-01	Steel Spacer
21	118802-01	Printed Circuit Board Support qty. 3
22	113875-02	Relay Assembly
23	118473-01	Fan Guard
24	118482-01	Motor Mount
25	113860-02	Motor Assembly
26	114160-01	Fan 8"
27	097805-03	Ignitor
28	097806-03	Ignitor Cable
29	101481-13	Thermal Limit Switch
30	098249-01	Nut
31	118497-01	Rear Plate
32	104146-05	Thermocouple
33	118765-02	Burner Assembly
34	118685-03	Injector
35	100146-01	Female Elbow
36	119496-02	Shell (Black)
37	118471-01	End Cap qty. 2
38	119459-01	Hold Down Bracket qty. 4
39	119497-02	Combustion Chamber
40	118477-01	Steel Tube qty. 4
41	118475-01	Cord Cleat qty. 2
42	118478-01	Foot Leg qty. 2
43	118474-01	Foot
44	119631-01	Nut

Parts available - not shown

M9900-199	Wire Assembly, Black
M9900- 00	Wire Assembly, White
101480-14	Wire Assembly, Blue
118774-02	Hose and Regulator Assembly
118687-03	Operation Decal
119144-03	Model Data Decal
119146-01	Wiring Decal





Desa LP 125,000 BTU

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170,000 BTU Forced Air Desa Propane Heater

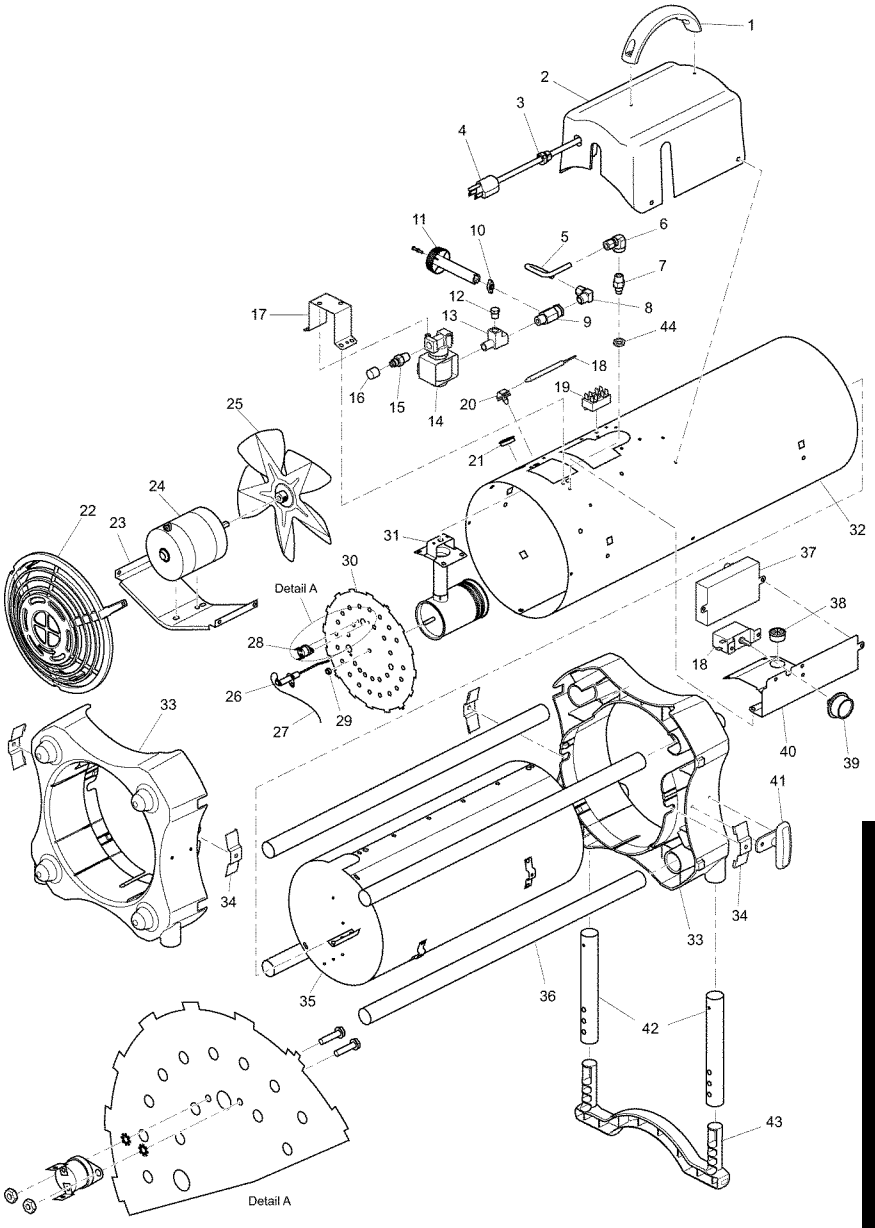
Model Numbers

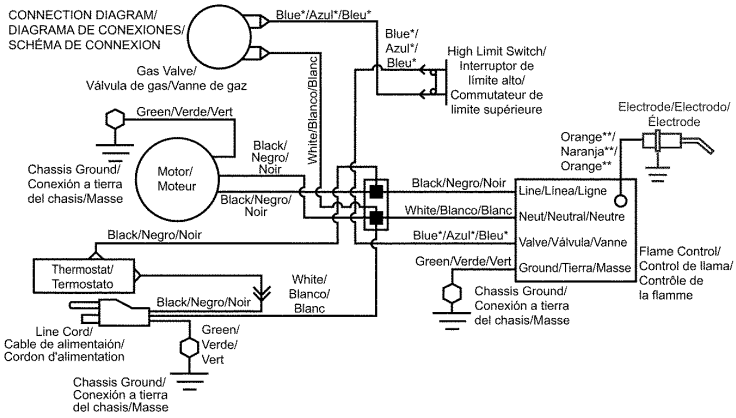
TB103 TB108
TB113

Key No.	Part No.	Description
1	118476-01	Handle
2	118770-01	Control Box
3	M11143-2	Strain Relief Bushing
4	098219-42	Power Supply Cord Assembly
5	118767-01	Fuel Tube
6	100146-01	Female Elbow
7	118685-04	Injector
8	M50114-02	Male Elbow
9	114159-04	Ball Valve Assembly
10	113810-01	Ball Valve Knob Insert
11	118773-02	Ball Valve Knob
12	098276-01	Plug
13	118768-01	Street Tee
14	098201-01	Solenoid Valve
15	097809-04	Male Fitting
16	078978-03	Sleeve Cap
17	118766-01	Solenoid Valve Bracket
18	113944-01	Thermostat Assembly
19	119401-01	Terminal Block
20	099123-01	Thermobulb Clip
21	M50104-02	Shorty Bushing
22	118473-01	Fan Guard
23	118482-01	Motor Mount
24	113941-02	Motor Assembly
25	113950-01	Fan
26	097805-03	Ignitor
27	097806-03	Ignitor Cable
28	101481-05	Thermal Limit Switch
29	098249-01	Nut
30	118497-01	Rear Plate
31	118765-02	Burner Assembly
32	119496-03	Shell (Black)
33	118471-01	End Cap qty. 2
34	119459-01	Hold Down Bracket qty. 4
35	119497-03	Combustion Chamber
36	118477-02	Steel Tube qty. 4
37	110287-01	DSI Control
38	097776-01	Universal Bushing
39	113961-01	Thermostat Knob
40	118919-01	Heat Shield
41	118475-01	Cord Cleat qty. 2
42	118478-02	Foot Leg qty. 2
43	118474-01	Foot
44	119631-01	Nut

Parts available - not shown

M16841-80	Wire Assembly, White
M9900-170	Wire Assembly, Black
101480-15	Wire Assembly, Blue
118774-03	Hose and Regulator Assembly
118687-04	Operation Decal
119144-04	Model Data Decal
119146-02	Wiring Decal
099504-08	Warning Decal
110267-02	DSI Control Harness





Desa LP 170,000 BTU

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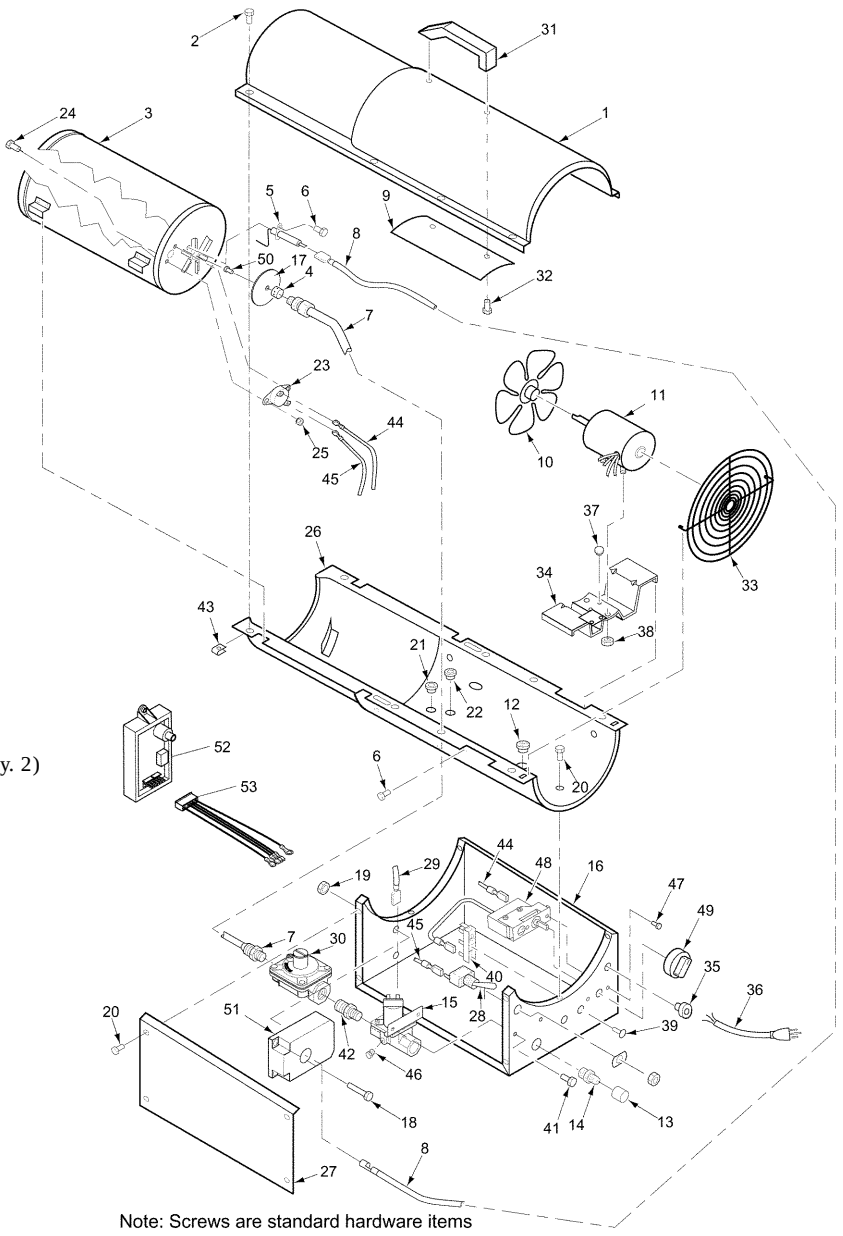
150,000 BTU Desa Natural Gas Heater

Model Numbers
Master
BNG150T

Key No.	Part Number	Description
1	098511-114	Upper Shell
2	100647-01	Screw, #10-16 x 1/2" (qty. 8)
3	098512-53	Combustion Chamber Kit
4	103891-01	Nozzle
5	103934-01	Ignitor
6	M11084-39	Screw, #8-18 x 3/8" (qty. 2)
7	099334-03	Fuel Tube Kit
8	097806-02	Ignitor Cable
9	M51108-01	Heat Shield
10	M51153-01	Fan
11	103404-01	Motor
12	097776-01	Universal Bushing
13	078978-01	Sleeve Cap
14	103401-01	Male Connector
15	103403-01	Solenoid Valve
16	097966-12AA	Base
17	078896-02	Washer, Baffle
18	M12461-7	Screw, #6-32 x 1" (qty. 2)
19	099432-01	Hex Nut, #6-32 (qty. 2)
20	M11084-27	Screw, #10-16 x 1/2" (qty. 10)
21	M50104-05	Shorty Bushing
22	M50104-01	Shorty Bushing
23	101481-05	Thermal Limit Switch
24	097968-05	Screw, #4-40 x 1/2" (qty. 2)
25	097384-04	Hex Nut, #4-40 Captive Washer (qty. 2)
26	098511-129	Lower Shell
27	097965-02AA	Side Cover
28	098226-01	On/Off Switch
29	079010-38	Wire Assembly
30	103406-01	Regulator
31	M51104-01	Handle
32	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
33	097964-03AA	Fan Guard
34	101206-01	Motor Support Brkt Assy
35	M11143-1	Strain Relief Bushing
36	098219-17	Power Cord
37	M50631	Rubber Bumper (qty. 2)
38	NTC-4C	Lock Nut (qty. 2)
39	099157-01	Break Mandrell Rivet, 3/16"
40	099125-01	Terminal Board
41	M12461-25	Screw, #10-32 x 1/4" (qty. 2)
42	103407-01	Fitting, Union 1/2 NPT to 1/2 NPT
43	M11271-8	Clip Nut (qty. 8)
44	101480-10	High Temperature Wire Assembly
45	101480-11	High Temperature Wire Assembly
46	098276-01	Plug 1/8 NPTF Hex
47	M10908-1	Screw, Hex TPG "F" 6-32 x .25 (qty. 2)
48	097657-03	Built-in Thermostat
49	104905-01	Thermostat Knob
50	103400-02	Screw, Baffle
51	M51605-02	DSI Control
52	110287-01	DSI Control No. 2003-45 1 Potted
53	110267-01	Wire Harness for 110267-01 Only

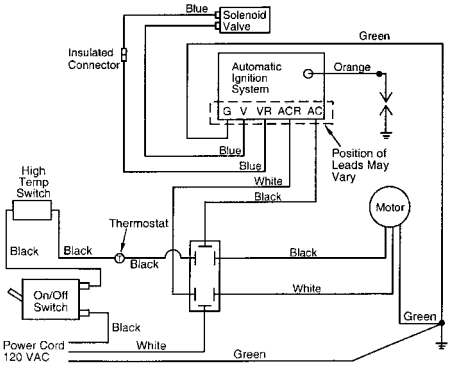
PARTS AVAILABLE - NOT SHOWN

	097940-09	Tradename Decal (qty. 2)
	103886-01	General Info Decal
	099504-01	Warning Decal (qty. 2)
	103402-01	Wiring Decal
	103021-01	Thermostat Decal
	103889-01	NG Warning Decal
	5010	1/2" x 10' Hose
	54	1/2" x 1/2" Swivel Union



Note: Screws are standard hardware items

Electrical Connection Diagram



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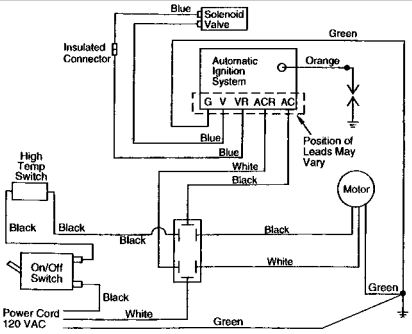
150,000 BTU Desa Propane Heater

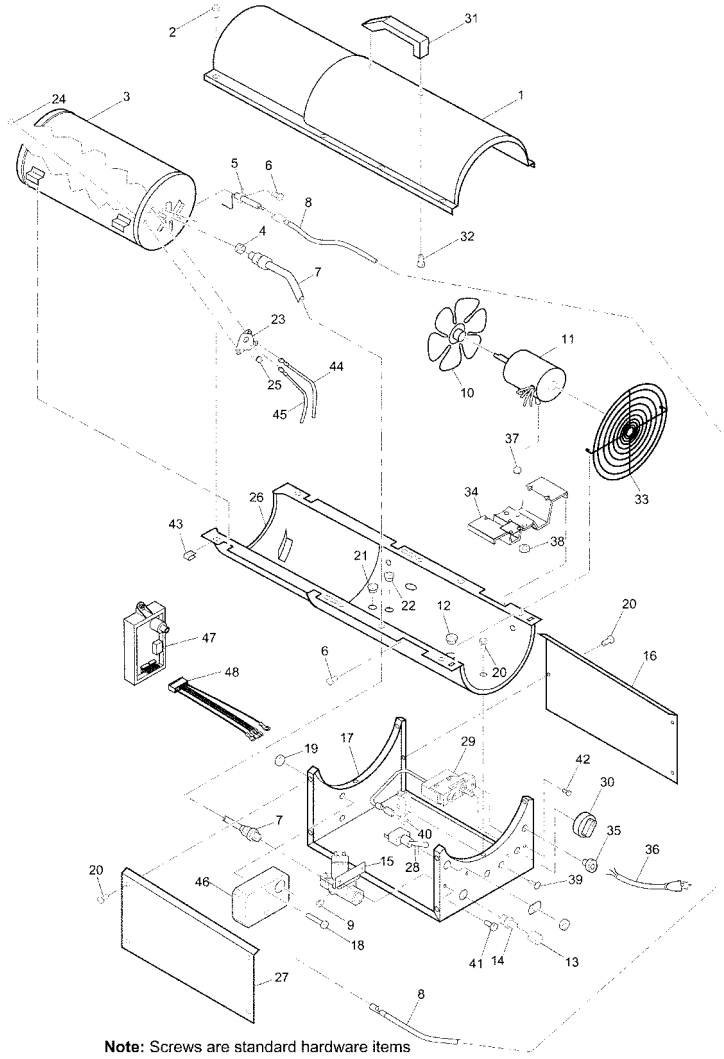
Model Numbers

Reddy	Vanguard	Master
RLP155	VLP155	BLP155
RLP155A		BLP155A
		BLP155AT

Desa
C155LP

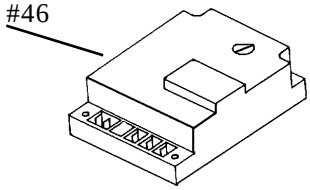


Key No.	Part Number	Description
1	098511-116	Upper Shell (Replacement Part Will Be Black)
2	M15823-27	Screw, #10-16 x 1/2" (qty. 8)
3	098512-35	Combustion Chamber Kit
4	099138-01	Nozzle
5	099133-01	Ignitor
6	M11084-38	Screw, #8-18 x 3/8" (qty. 2)
7	099334-01	Fuel Tube Kit
8	097806-02	Ignitor Cable
9	098276-01	Plug 1/8 NPTF Hex
10	M51153-01	Fan
11	105336-01	Motor
12	097776-01	Universal Bushing
13	078978-01	Sleeve Cap
14	M51572-02	Male Connector
15	103015-01	Solenoid Valve
16	098450-03	Side Cover (thermostat side)
17	099161-10	Base
18	M12461-7	Screw, #6-32 x 1" (qty. 2)
19	099432-01	Hex Nut, #6-32 (qty. 2)
20	107992-01	Screw, #10-16 x 3/8" (qty. 13)
21	M50104-05	Shorty Bushing
22	M50104-01	Shorty Bushing
23	101481-07	Thermal Limit Switch
24	097968-05	Screw, #4-40 x 1/2" (qty. 2)
25	097384-04	Hex Nut, #4-40 Captive Washer (qty. 2)
26	098511-129	Lower Shell (Replacement Part Will Be Black)
27	098447-03	Side Cover (solenoid side)
28	098226-01	On/Off Switch
29	097657-03	Built-in Thermostat (if applicable)
30	104905-01	Thermostat Knob
31	M51104-01	Handle
32	M11084-29	Screw, #10-16 x 3/4" (qty. 2)
33	097964-03AA	Fan Guard
34	101206-01	Motor Support Brkt Assy
35	M11143-1	Strain Relief Bushing
36	098219-17	Power Cord
37	M50631	Rubber Bumper (qty. 2)
38	NTC-4C	Lock Nut (qty. 2)
39	099157-01	Break Mandrell Rivet, 3/16"
40	099125-01	Terminal Board
41	M12461-25	Screw, #10-32 x 1/4" (qty. 2)
42	M10908-1	Screw Hex TPG "F" 6-32 x .25 (qty. 2)
43	M11271-8	Clip Nut (qty. 8)
44	101480-10	High Temperature Wire Assy
45	101480-11	High Temperature Wire Assy
46	M51605-02	DSI Control No. 2003-19
47	110287-01	DSI Control No. 2003-45
48	110267-01	DSI Wire Harness (2003-45 Only)



Note: Screws are standard hardware items

Key #46



DSI Control
Heater Part # M51605-02
Part number on DSI
Control Box:
10N-117-3-8.5-8.5-Q012

PARTS AVAILABLE - NOT SHOWN

097940-07	Tradename Decal (qty. 2)
103017-01	General Info Decal
LPA3070	Regulator & Hose Assy
LPA1010	10' Hose Assy
LPA2100	Regulator
G1690	Fuel Gas Connector (POL Fitting)
099504-01	Warning Decal (qty. 2)
102967-01	Wiring Decal
103021-01	Thermostat Decal (if applicable)
HA1210	Thermostat w/numbers on dial (non T-stat units)
KT121	Thermostat with warmer-colder
382550	25' Hose Assembly
P400	T-Block Manifold
1630RU	30" Propane Tank Pigtail
C100	100# LP cylinder (qty. 2)

*If you change the motor, eliminate the relay. If your relay goes bad, you have to change motors. New motors are equipped with a capacitor.

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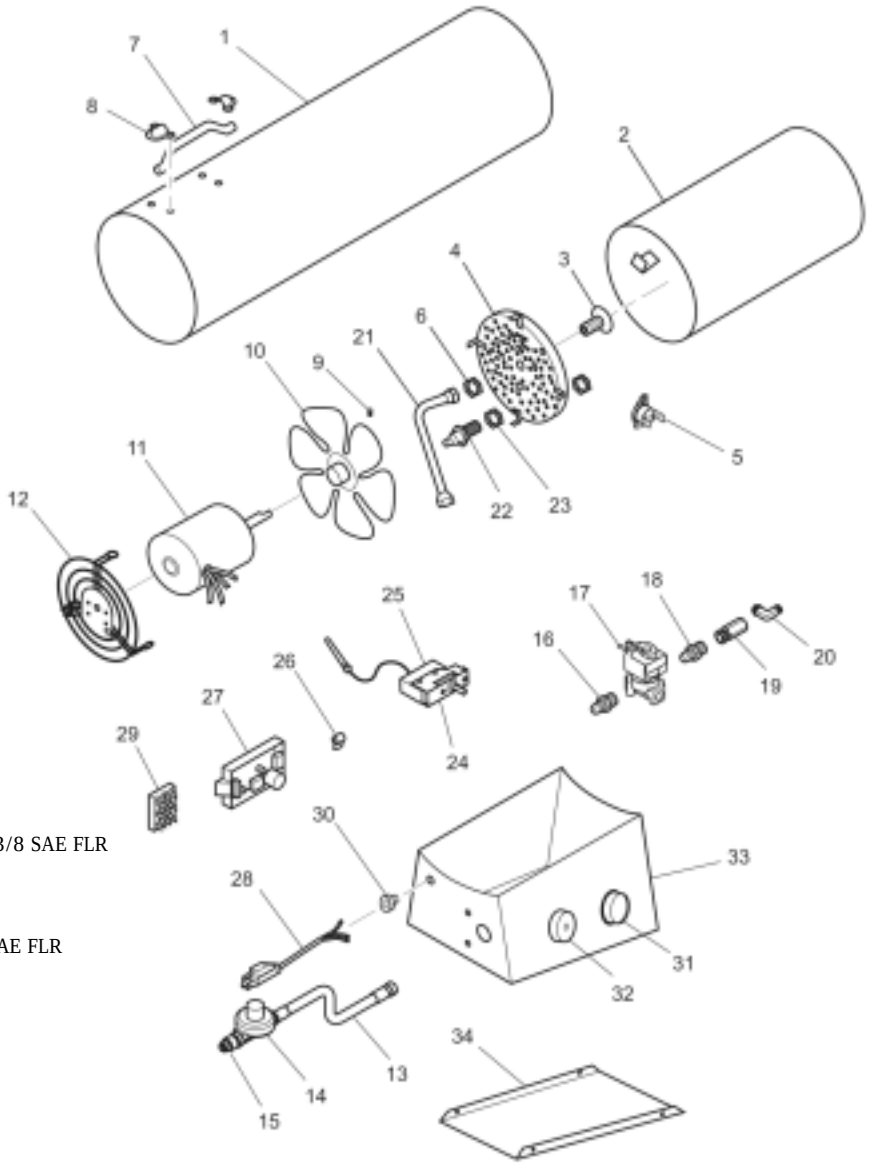
170,000 BTU Desa Propane Heater

Model Numbers

Reddy	Remington	Master
RLP170VT	REM170VT	BLP170VT

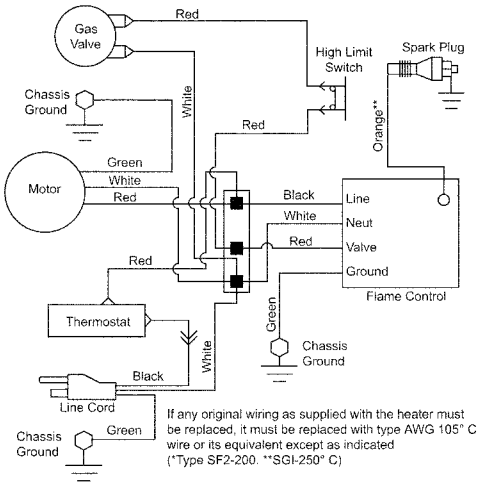


Key No.	Part Number	Description
1	113938-01	Outer Shell Orange
	113938-02	Outer Shell, Red
	113938-03	Outer Shell, Yellow
	113938-04	Outer Shell, Green
	113938-05	Outer Shell, Black
2	**	Middle Cylinder
3	113940-01	Ori•ce Assembly
4	113937-01	Flame Holder Assembly
5	115324-01	High Limit Switch
6	113888-01	Ori•ce Nut
7	097917-01	Handle
8	097918-01	Handle Mounting Clips 2
9	113948-01	Set Screw, Nyloc
10	113950-01	Fan
11	113941-01	Motor Assembly
12	113942-01	Inlet/Motor Mounting Grille
13	113776-01	Hose Assembly
14	113862-01	Regulator, 28" WC
15	113791-01	POL Excess Flow Valve
16	113952-01	Male Fitting Conn. 3/8 MPT x 3/8 SAE FLR
17	113951-01	Solenoid Valve, Goyen
18	113964-01	Fitting Close Nipple
19	113966-01	Burn Rate Adjustment Valve
20	113965-01	Elbow Fitting, 3/8 MPT x 1/2 SAE FLR
21	113943-01	Fuel Tube Assembly
22	113963-01	Spark Plug, Flame Sensor
23	113886-01	Spark Plug Nut
24	113947-01	Thermostat Mounting Bracket
25	113944-01	Thermostat Assembly
26	113949-01	Loop Clamp, 5/16
27	110287-01	Flame Control
28	113864-01	Power Cord Assembly
29	113960-01	Terminal Board
30	113865-01	Bushing Strain Relief
31	113961-01	Knob, Thermostat
32	113962-01	Burn Rate Adjustment Knob
33	113945-01	Control Box
34	113946-01	Access Panel

PARTS AVAILABLE - NOT SHOWN

113883-01	Snap Bushing, 5/8 2
113802-07	Model Data Decal
113933-04	Operating Instructions Decal
113984-03	Warning Decal, English/Spanish
099504-08	Thermostat Warning Decal
113907-01	Warning Electrical Decal
113953-01	Wiring Schematic Decal
097650-01	Tradename Decal, Master
113858-04	Tradename Decal, All-Pro
113858-05	Tradename Decal, Universal
109111-03	Tradename Decal, Reddy
110789-01	Tradename Decal, Remington
113914-01	Hang Tag, English

CONNECTION DIAGRAM



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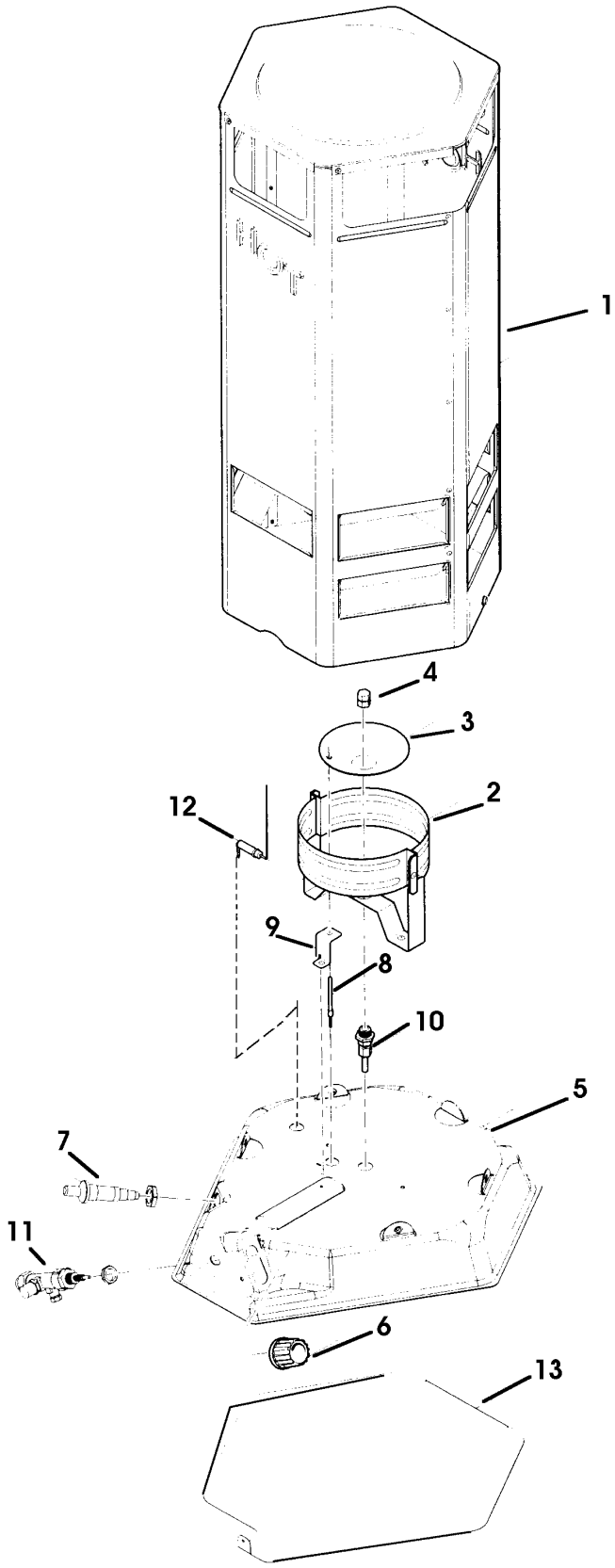
200,000 BTU Convection Desa Propane Heater

Model Numbers

Reddy	Master
RCP200V	TC200V

Key No.	Part Number	Description
1	103925-01	Top and Shell Assembly
2	103923-01	Burner Ring Assembly
3	101263-01	Burner Plate
4	097162-02	Burner Nozzle
5	103031-02	Base
6	103924-01	Knob Assembly
7	102445-01	Piezo Ignitor With Nut
8	099236-01	Thermocouple Kit
9	103906-01	Thermocouple Bracket
10	103927-01	Fuel Tube Kit
11	103926-01	Valve Assembly
12	103398-01	Ignitor Electrode With Lead
13	103396-01	Heat Shield
PARTS AVAILABLE - NOT SHOWN		
	098853-07	Tradename Decal (TC200V)
	098851-06	Tradename Decal (RCP100V)
	098831-03	Information Decal
	101284-02	Operation Decal
	7161NR	Piezo Nut
ACCESSORIES		
	LPA3005	Regulator & Hose Assembly
	LPA2005	Regulator
	LPA4020	Fuel Gas Connector
	LPA1020	10 foot Hose
	2525	25 foot Hose
	C100	100# LP Bottle (qty. 2)
	099237-01	Thermocouple Clip
	P400	T-Block Manifold
	G1630RU	30” Rubber Pigtail
	7111NR	Control Valve Powercoil

Screws Are Standard Hardware Items



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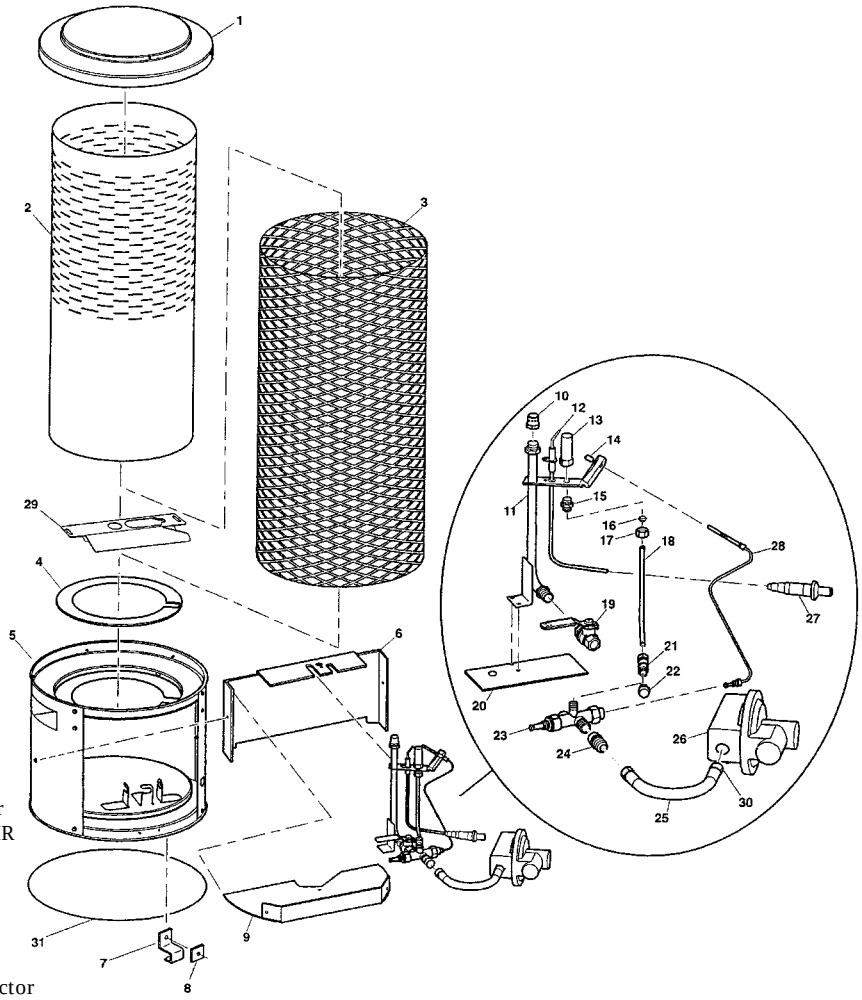
250,000 BTU Radiant Desa Natural Gas Heater

Model Numbers
Master
TC250RNG



Key No.	Part Number	Description
1	104145-02	Top Disk
2	103897-02	Emitter
3	103898-02	Shell
4	104116-01	Insulation Ring
5	104137-01	Outer Base Assembly
6	103935-01	Rear Burner Shield
7	103902-01	Leg (qty. 3)
8	103903-01	Spacer (qty. 6)
9	103900-02	Burner Shield
10	099138-05	Nozzle
11	104114-01	Burner Tube Assembly
12	104118-01	Ignitor Electrode
13	097163-07	Pilot Burner Assembly
14	099237-01	Thermocouple Clip
15	097161-01	Pilot Burner Orifice
16	M5788	Sleeve
17	M5787	Hex Nut
18	103028-02	Pilot Tube
19	097152-01	Manual Control Valve
20	103901-01	Burner Support
21	099461-01	Tee Compression Gauge
22	099460-01	Brass Hex Cap
23	097155-01	Automatic Control Valve
24	097157-03	1/4"FPT x 1/2" MFLR Connector
25	104142-01	Fuel Tube 1/2" MFIR x 1/2" MFIR
26	104141-01	Regulator (Fisher Type R522H) 200PSI Max., 4PSI Min.
27	102445-01	Piezo Ignitor
28	099236-01	Thermocouple With Clip
29	104143-02	Pilot Shield
30	103401-01	1/2 NPT to 1/2 45˚ Male Connector
31	103899-01	Base Shield

PARTS AVAILABLE - NOT SHOWN

104120-01	Hose Fitting Regulator Assembly
098853-10	Tradename Decal
104128-01	Operation Decal
5010	Hose 1/2" x 10'
099237-01	Thermocouple Nut
7161NR	Piezo Nut
7111NR	Control Valve Powercoil

Screws Are Standard Hardware Items

Remember, this is a **high pressure heater** meaning household natural gas pressure will **not** work with this heater!

SPECIFICATIONS

Output Rating	250,000 BTU/Hr
Fuel	Natural Gas Only
Fuel Consumption	
Cubic Feet per hour	243
Supply Pressure to Regulator	
Maximum	200 PSI
Supply Pressure to Heater	
Minimum	4 PSI
Maximum without regulator	4 PSI
Manifold Pressure	3.5 PSI
Weight	33 lbs
Shipping Weight	40 lbs
Size (L/W/H)	46 x 16 x 16

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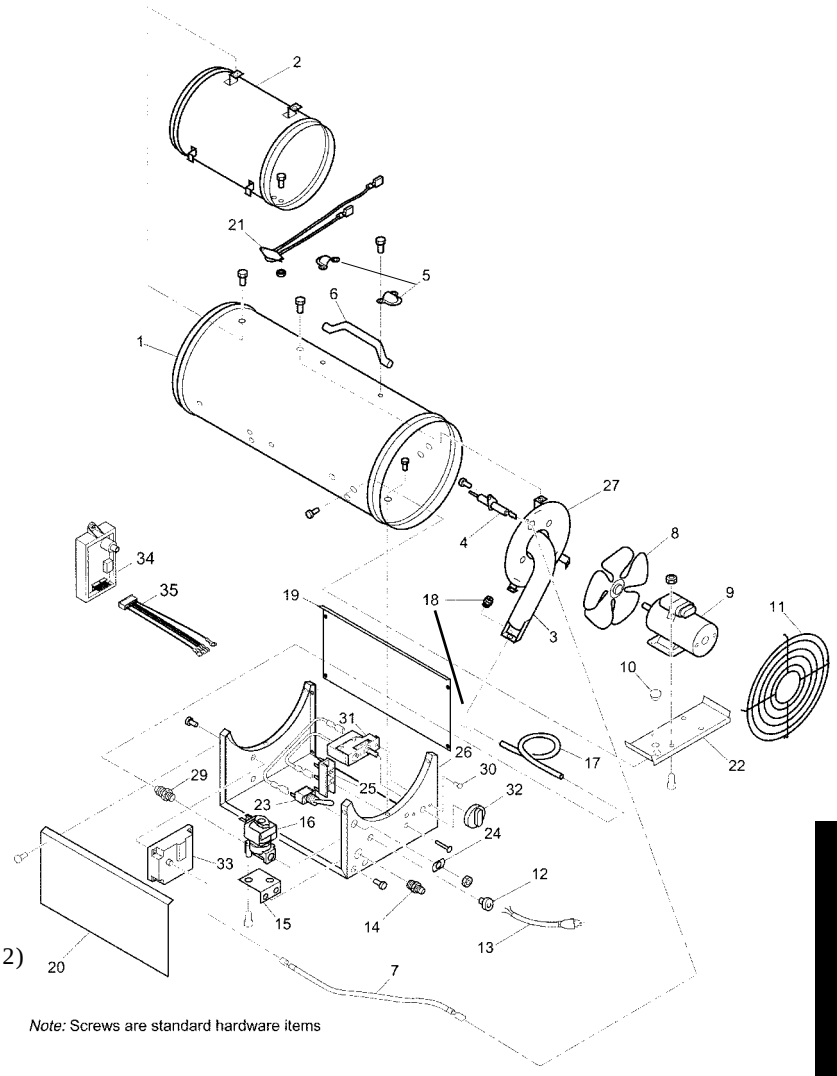
375,000 BTU Forced Air Desa Propane Heater

Model Numbers

Reddy	Master
RLP375AT	BLP375AT

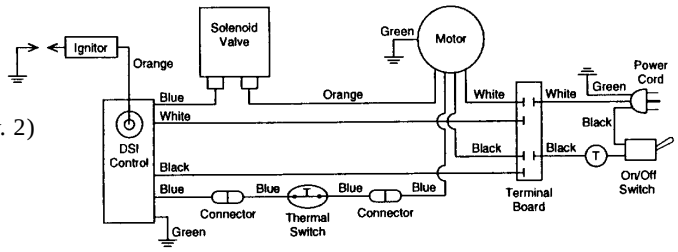
Key No.	Part Number	Description
1	097844-02	Outer Shell Assembly -yellow only
2	097847-01	Combustion Chamber Assembly
3	097849-01	Burner Assembly
4	097805-01	Ignitor
5	097918-01	Cleat (qty. 2)
6	097917-01	Handle
7	097806-02	Ignitor Cable
8	097811-01	Fan
9	097802-01	Motor
10	M50104-02	Shorty Bushing
11	097838-02	Fan Guard
12	M11143-1	Strain Relief Bushing
13	098219-17	Cord Assembly
14	097809-01	Male Fitting
15	097828-01	Solenoid Bracket
16	098201-01	Solenoid Valve
17	100145-01	Fuel Tube
18	099679-01	Nozzle
19	097833-04	Side Cover (thermostat side)
20	097833-03	Side Cover (solenoid side)
21	101732-03	Thermal Switch Kit
22	097829-02	Motor Mount
23	098226-01	On/Off Switch
24	M50941-01	Indicator Plate
25	099125-01	Terminal Board
26	100408-03	Base
27	097848-01	Rear Plate Assembly
29	098827-01	Compression Fitting
30	M10908-1	Screw, Hex TPG "F" 6-32x.25 (qty. 2)
31	097657-03	Thermostat
32	104905-01	Thermostat Knob
33	M51605-02	DSI Control No. 2003-19
34	110287-01	DSI Control No. 2003-45
35	110267-01	DSI Wire Harness (2003-45 Only)



Note: Screws are standard hardware items

PARTS AVAILABLE - NOT SHOWN

LPA3030	Regulator & Hose Assembly
103018-01	Owner's Manual
102971-01	Electrical Decal
103019-01	General Info Decal
097941-09	Tradename Decal (RLP375A)
097895-05	Tradename Decal (BLP375A) (qty. 2)
097916-01	Baffle
LPA1020	10' Hose
2525	25' Hose
LPA2020	Regulator
LPA4020	Fuel Gas Connector
099504-01	Warning Decal
103021-01	Thermostat Decal



SPECIFICATIONS

Output Rating	225,000 to 375,000 BTU/Hr
Fuel	Propane Vapor
Fuel Consumption (Approx.)	
Gallons per hour	2.5 Min/4.0 Max
Pounds per hour	10.4 Min/17.4 Max
Gas Supply Pressure for the purpose of Input Adjustment	
Minimum	25 psi
Maximum	Bottle Pressure
Regulator Outlet Pressure	7-20 psi
Hot Air Output Apprx (CFM)	1500
Motor (Thermally Protected)	1725 RPM, 1/5 hp
Electrical Input	120V, 60 Hz
Amperage	4.2
Ignition	Direct Spark
Weight Apprx (Lbs)	42
Shipping Weight Apprx (Lbs)	49
Size - Inches	
Length x Width x Height	32 x 13 x 19 1/2

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Desa Gas Quick Parts Ref.

REDDY LP GAS

Model#	Motor	Thermocouple/ Flame Sensor	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan Blade	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Hose/Reg Assy	Spark Generator
RLP30	104156-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	104144-01 7111NR Power Coil	101478-02	101732-05 Limit	104784-01	LPA2170	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3120	102445-01 Piezo
RLP35	099521-01	099538-01 Thermocouple	NA	099728-01 7111NR Power Coil	099537-01	101732-05 Limit	099539-01	LPA2110	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3090	102445-01 Piezo
RM40LP	104156-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	104144-03 7111NR Power Coil	101478-02	101732-05 Limit	104784-01	LPA2170	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA2170	102445-01 Piezo
RLP45	079054-01	M51580-01 Flame Sensor	M51605-01	079473-02	M50893-01	079147-02 Sail	HA3013	LPA2070	078980-03	LPA1000 (10ft) 3825 (25ft)	LPA3010	NA
RLP50	100589-01	099538-01 Thermocouple	NA	100591-01 7111NR Power Coil	099537-03	101732-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
RLP50A	103864-01	099538-01 Thermocouple	NA	100591-01 7111NR Power Coil	103861-01	101732-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
RLP50V	103864-01	099538-01 Thermocouple	NA	103921-01 7111NR Power Coil	099537-03	101481-05 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
RLP50VA	105332-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	103921-01 7111NR Power Coil	101478-03	101481-01 Limit	099539-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
RLP80	079054-01	M51580-01 Flame Sensor	M51605-01	079473-02	M51107-01	079147-01 Sail	HA3013	LPA2080	078980-02 3825 (25ft)	LPA1000 (10ft)	LPA3080	NA
RLP100	102366-01	099538-01 Thermocouple	NA	103846-01 7111NR Power Coil	M51153-01	101732-01 Limit 103847-01 Relay Kit	102487-01	LPA2150	099138-02	LPA1000 (10ft) 3825 (25ft)	LPA3100	102601-01 Eaton
RLP100A	107373-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	102367-02 7111NR Power Coil	M51153-02	101481-04 Limit	099133-02	See Hose/Reg Assy	106188-01	See Hose/Reg Assy	079060-06	102601-01 Eaton
RLP150	105336-01	M51580-01 Flame Sensor	M51605-01	079473-01	M23147	079147-01 Sail	HA3013	LPA2090	078980-01	LPA1000 (10ft) 3825 (25ft)	LPA3020	NA
RLP155	105336-01	NA	M51605-02	099132-01	M51153-01	097952-03 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
RLP155A	105336-01	NA	M51605-02	099132-01	M51153-01	101732-01 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
RLP155AT (2003)	105336-01	NA	110287-01 110267-01 Wire Harness	103015-01	M51153-01	101732-01 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
RLP375A RLP375AT	097802-01	NA	M51605-02	098201-01	097811-01	101732-03 Limit	097805-01	LPA2020	099679-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA
RLP375AT (2003)	097802-01	NA	110287-01 110267-01 Wire Harness	098201-01	097811-01	101732-03 Limit	097805-01	LPA2020	099679-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA

MASTER LP GAS

Model#	Motor	Thermocouple/ Flame Sensor	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan Blade	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Hose/Reg Assy	Spark Generator
BLP30	104156-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	104144-01 7111NR Power Coil	101478-02	101732-05 Limit	104784-01	LPA2170	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3120	102445-01 Piezo
BLP35	099521-01	099538-01 Thermocouple	NA	099728-01 7111NR Power Coil	099537-01	101723-02 Limit	099539-01	LPA2110	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3090	102445-01 Piezo
BLP42	104156-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	104144-03	101478-02	101732-05	104784-01	LPA2170	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3120	102445-01 Piezo
BLP45	079054-01	M51580-01 Flame Sensor	M51605-01	079473-02	M50893-01	079147-02 Sail	HA3013	LPA2070	078980-03	LPA1000 (10ft) 3825 (25ft)	LPA3010	NA
BLP50	100589-01	099538-01 Thermocouple	NA	100591-01 7111NR Power Coil	099537-03	101732-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
BLP50A	103864-01	099538-01 Thermocouple	NA	100591-01 7111NR Power Coil	103865-01	101732-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
BLP50V	103864-01	099538-01 Thermocouple	NA	103921-01 7111NR Power Coil	099537-03	101481-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
BLP50VA	105332-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	103921-01 7111NR Power Coil	101478-01	101481-04 Limit	099539-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
BLP80	079054-01	M51580-01 Flame Sensor	M51605-01	079473-02	M51107-01	079147-01 Sail	HA3013	LPA2080	078980-02	LPA1000 (10ft) 3825 (25ft)	LPA3010	NA
BLP100	102366-01	099538-01 Thermocouple	NA	103846-01 7111NR Power Coil	M51153-01	101732-04 Limit 103847-01 Relay Kit	102487-01	LPA2150	099138-02	LPA1000 (10ft) 3825 (25ft)	LPA3100	102601-01 Eaton
BLP100A	107373-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	102367-02	M51153-02	101481-04 Limit	099133-02	See Hose/Reg Assy	106188-01	See Hose/Reg Assy	079060-06	102601-01 Eaton
BLP150	105336-01	M51580-01 Flame Sensor	M51605-01	079473-01	M23147	079147-01 Sail	HA3013	LPA2090	078980-01	LPA1000 (10ft) 3825 (25ft)	LPA3020	NA
BLP155	105336-01	NA	M51605-02	099132-01	M51153-01	079752-03 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
BLP155A	105336-01	NA	M51605-02	099132-01	M51153-01	101732-01 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
BLP155AT	105336-01	NA	M51605-02	103015-01	M51153-01	101732-01 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
BLP155AT (2003)	105336-01	NA	110287-01 110267-01 Wire Harness	103015-01	M51153-01	101481-07 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
BLP170VT	113941-01	NA	110287-01	113951-01	113950-01	6168NR	113963-01	113862-01	113940-01	6152NR	NA	113954-01
BLP375	097802-01	NA	098884-01	098201-01	097811-01	097952-01 Limit	097805-01	LPA2020	097810-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA
BLP375A BLP375AT	097802-01	NA	M51605-02	098201-01	097811-01	097952-01 Limit	097805-01	LPA2020	097810-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA
BLP375AT (2003)	097802-01	NA	110287-01 110267-01 Wire Harness	098201-01	097811-01	101732-03 Limit	097805-01	LPA2020	099679-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA

Desa Gas Quick Parts Ref.

REMINGTON LP GAS

Model#	Motor	Thermocouple/ Flame Sensor	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan Blade	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Hose/Reg Assy	Spark Generator
REM30LP	104156-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	104144-01 7111NR Power Coil	101478-02	101732-05 Limit	104784-01	LPA2170	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3120	102445-01 Piezo
REM35LP	099521-01	099538-01 Thermocouple	NA	099728-01 7111NR Power Coil	099537-01	101732-02 Limit	099539-01	LPA2110	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3090	102445-01 Piezo
REM50LP	100589-01	099538-01	NA	100591-01 7111NR Power Coil	099537-03	101732-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
REM50LPA	103864-01	099538-01	NA	100591-01 7111NR Power Coil	103865-01	101732-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
REM50PV	103864-01	099538-01	NA	103921-01 7111NR Power Coil	099537-03	101732-01 Limit	100588-01	See Hose/Reg assy	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3055	102445-01 Piezo
REM50PVA	105332-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	103921-01	101478-03 7111NR Power Coil	101481-04 Limit	099539-01	See Hose/Reg assy	See Valve	LPA1020 (10ft)	LPA3055 2525 (25ft)	102445-01 Piezo
REM100LP	102366-01	099538-01	NA	103846-01 7111NR Power Coil	M51153-01	103847-01 Relay 101732-04 Limit	102487-01	LPA2150	099138-02	LPA1000 (10ft) 3825 (25ft)	LPA3100	102601-01
REM100LPA	107373-01	104146-02 Thermocouple 100898-01 Nut (qty 2)	NA	102367-02	M51153-02	101481-04 Limit	099133-02	See Hose/Reg Assy	106188-01	See Hose/Reg Assy	079060-06	102601-01 Eaton
REM150LP	105336-01	M51580-01	M51605-01	079473-01	M23147	079147-01 Sail	HA3013	LPA2090	078980-01	LPA1000 (10ft) 3825 (25ft)	LPA3020	NA
BLP375	097802-01	NA	098884-01	098201-01	097811-01	097952-01 Limit	097805-01	LPA2020	097810-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA
BLP375A BLP375AT	097802-01	NA	M51605-02	098201-01	097811-01	097952-01 Limit	097805-01	LPA2020	097810-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA
BLP375AT	097802-01	NA	110287-01	098201-01	097811-01	101732-03 Limit	097805-01	LPA2020	099679-01	LPA1020 (10ft)	LPA3030	NA

VANGUARD LP GAS

Model#	Motor	Thermocouple/ Flame Sensor	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan Blade	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Hose/Reg Assy	Spark Generator
VLP35	099521-01	099538-01	NA	099728-01 7111NR Power Coil	099537-01	101732-02 Limit	099539-01	LPA2110	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3090	102445-01
VLP45	079054-01	M51580-01	M51605-01	079473-02	M50893-01	079147-02 Sail	HA3013	LPA2070	078980-03	LPA1000 (10ft) 3825 (25ft)	LPA3010	NA
VLP80	079054-01	M51580-01	M51605-01	079473-02	M51107-01	079147-01 Sail	HA3013	LPA2080	078980-02	LPA1000 (10ft) 3825 (25ft)	LPA3010	NA
VLP150	105336-01	M51580-01	M51605-01	079473-01	M23147	079147-01 Sail	HA3013	LPA2090	078980-01	LPA1000 (10ft) 3825 (25ft)	LPA3020	NA
VLP155	105336-01	M51580-01	M51605-02	099132-01	M51153-01	097952-03 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
VLP375	097802-01	NA	098884-01	098201-01	097811-01	097952-01 Limit	097805-01	LPA2020	097810-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA
VLP375A	097802-01	NA	M51605-02	098201-01	097811-01	097952-01 Limit	097805-01	LPA2020	097810-01	LPA1020 (10ft)	LPA3030	NA

DESA LP GAS

Model#	Motor	Thermocouple/ Flame Sensor	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan Blade	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Hose/Reg Assy	Spark Generator
C35LP	099521-01	099538-01	NA	099728-01 7111NR Power Coil	099537-01	101732-02 Limit	099539-01	LPA2110	See Valve	LPA1020 (10ft) 2525 (25ft)	LPA3090	102445-01 Piezo
C155LP	105336-01	NA	M51605-02	099132-01	M51153-01	097952-03 Limit	099133-01	LPA2100	099138-01	LPA1010 (10ft) 382550 (25ft)	LPA3070	NA
C375LP	097802-01	NA	098884-01	098201-01	097811-01	097952-01 Limit	097805-01	LPA2020	097810-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA

SUNBELT LP GAS

Model#	Motor	Thermocouple/ Flame Sensor	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan Blade	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Hose/Reg Assy	Spark Generator
SBLP155AT	105336-01	NA	110287-01 110267-01 Wire Harness	103015-01	M51153-01	101487-01 Limit	099133-01	LPA2100	099138-01	LPA1010(10ft) 382550 (25ft)	LPA3070	NA
SBLP375AT	097802-01	NA	110287-01 110267-01 Wire Harness	098201-01	097811-01	101732-03 Limit	097805-01	LPA2020	099679-01	LPA1020 (10ft) 2525 (25ft)	LPA3030	NA

MASTER NATURAL GAS

Model#	Motor	Thermocouple	Ignition Control/D.S.I.	Valve:Solenoid/Thermoelectric	Safety Switches	FAN	Igniter/Electrode	Regulator	Orifice: Pilot/Burner
BNG150T	105336-01	NA	M51605-02	103403-01 Solenoid	101481-05 High Limit	M51153-01	103934-01	103406-01	103891-01 Nozzle
BNG150T (2003)	105336-01	NA	110287-01 110267-01 Harness	103403-01 Solenoid	101481-05 High Limit	M51153-01	103934-01	103406-01	103891-01 Nozzle
TC100RNG	NA	099237-01 099236-01 Clip	NA	104119-01 Thermoelectric	NA	NA	102445-01 Piezo 104118-01 Electrode	103936-01	097161-04 Pilot 099138-03 Burner
TC100VRNG	NA	107374-01	NA	103930-03 Thermoelectric 7111NR Power Coil	NA	NA	102445-01 Piezo 106174-02 Electrode	103406-02	106184-02 Burner Kit
TC250RNG	NA	097151-01	NA	097155-01 Thermoelectric 7111NR Power Coil	NA	NA	102445-01 Piezo 104118-01 Electrode	104141-01	097161-01 Pilot 099138-05 Burner

TANK TOPS

Model#	Thermocouple	Orifice	Gas Valve	Hose	Regulator
HD12	100886-01	NA	NA	NA	LPA2025
HD12A	E73117	NA	NA	NA	E73410
HD12B	100886-01	100889-01	NA	NA	LPA2025
HD12C	100886-01	NA	NA	NA	LPA2025
HD12C-A	E73117	NA	NA	P4122	NA
HD12C-B	100886-01	NA	NA	NA	LPA2025
HD15	100886-01	100889-03	NA	NA	LPA2025
HD24A	E73117	NA 7111NR Power Coil (Qty 2)	NLA	NA	E73410
HD24B	100886-01	108889-01	NLA 7111NR Power Coil (Qty 2)	100921-01 (Qty 2)	LPA2025
TT15	100886-01	100889-03	NLA 7111NR Power Coil	NA	LPA2025
TT24B	100886-01	108889-01	NLA 7111NR Power Coil (Qty 2)	100921-01 (Qty 2)	LPA2025

Desa Gas Quick Parts Ref.

REDDY PROPANE CONVECTION & RADIANT HEATERS

Model#	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
RCP25	099236-01 099237-01 Nut	101864-01 7111NR Power Coil	LPA4000 Piezo 101878-01 Electrode	LPA2025	097161-01 Pilot 097162-01 Burner	LPA1025 (10ft)	LPA3025 Hose & Reg Assy 101864-01 Complete Burner Assy
RCP80	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 099539-02 Electrode	LPA2130	097163-03 Pilot Assy 099679-01 Burner	LPA1000 (10ft) 3825 (25ft)	LPA3035 Hose & Reg Assy
RCP80V	099236-01 099237-01 Nut	103030-01 7111NR Power Coil	102445-01 Piezo 103904-01 Electrode	LPA2160	103032-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3110 Hose & Reg Assy 103036-01 Stealth Knob
RCP80VA	113790-01	113787-01	113797-01	113792-01	See Valve	113776-01 (10ft) 3825 (25ft)	113793-01 Ball Valve 113809-01= Ball Valve Knob
RCP200	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2050	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve
RCP2000	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 101278-01 Electrode	LPA2005	097161-01 Pilot 097162-02 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3005 Hose & Reg Assy 097152-01 Manual Control Valve
RCP200V	099236-01 099237-01 Nut	103926-01 7111NR Power Coil	102445-01 Piezo 103398-01 Electrode	LPA2005	097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3005 Hose & Reg Assy 103924-01 Knob
RCP200VA	113790-01	113787-01	113797-01	113819-01	See Valve	113815-01 (10ft) 2525 (25ft)	113793-01 Ball Valve 113809-01= Ball Valve Knob
RCP250	099236-01	097155-01	LPA4000 Piezo	LPA2010	097163-03 Pilot Assy	LPA1020 (10ft)	LPA3000 Hose & Reg Assy
RCP275	099237-01 Nut	7111NR Power Coil	097150-01 Electrode		097162-01 Burner	2525 (25ft)	097152-01 Manual Control Valve

MASTER PROPANE CONVECTION & RADIANT HEATERS

Model#	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
TC25	099236-01 099237-01 Nut	101864-01 7111NR Power Coil	102445-01 Piezo 101878-01 Electrode	LPA2025	097161-01 Pilot 097162-01 Burner	LPA1025 (10ft)	LPA3025 Hose & Reg Assy 101864-01 Complete Burner Assy
TC80	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 099539-02 Electrode	LPA2130	097163-03 Pilot Assy 099682-01 Burner	LPA1000 (10ft) 3825 (25ft)	LPA3035 Hose & Reg Assy 097152-01 Manual Control Valve
TC80V	099236-01 099237-01 Nut	103030-01 7111NR Power Coil	102445-01 Piezo 103904-01 Electrode	LPA2160	103032-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3110 Hose & Reg Assy 103036-01 Stealth Knob
TC80VA	113790-01	113787-01	113797-01	113792-01	See Valve	113776-01 (10ft) 3825 (25ft)	113793-01 Ball Valve 113809-01= Ball Valve Knob
TC100R	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 104118-01 Electrode	LPA2150	097161-03 Pilot Assy 099138-03 Burner	LPA1000 (10ft) 3825 (25ft)	LPA3100 Hose & Reg Assy 097152-01 Manual Control Valve
TC100VR	107374-01	109930-02 I	102445-01 Piezo 106174-01 Electrode	LPA2160	103032-02 Burner	LPA1000 (10ft) 3825 (25ft)	LPA3110 Hose & Reg Assy 099393-03 Control Knob
TC200	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2050	097161-03 Pilot Assy 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve
TC200V	099236-01 099237-01 Nut	103926-01 7111NR Power Coil	102445-01 Piezo 103398-01 Electrode	LPA2005	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3005 Hose & Reg Assy 103924-01 Knob
TC200VA	113790-01	113787-01	113797-01	113819-01	See Valve	113815-01 (10ft) 2525 (25ft)	113793-01 Ball Valve 113809-01= Ball Valve Knob
TC250	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097163-03 Pilot Assy 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3000 Hose & Reg Assy 097152-01 Manual Control Valve
TC250A	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3000 Hose & Reg Assy 097152-01 Manual Control Valve
TC275	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3000 Hose & Reg Assy 097152-01 Manual Control Valve
TC275J	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 101278-01 Electrode	LPA2005	097161-01 Pilot 097162-02 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3005 Hose & Reg Assy 097152-01 Manual Control Valve

REMINGTON PROPANE CONVECTION & RADIANT HEATERS

Model#	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
REM25LP	099236-01 099237-01 Nut	101864-01 7111NR Power Coil	102445-01 Piezo 101878-01 Electrode	LPA2025	097161-01 Pilot 097162-01 Burner	LPA1025 (10ft)	LPA3025 Hose & Reg Assy 101864-01 Complete Burner Assy
REM200LP	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-02 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3005 Hose & Reg Assy 097152-01 Manual Control Valve
REM2000	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 101278-01 Electrode	LPA2005	097161-01 Pilot 097162-02 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve
REM275	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-02 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3000 Hose & Reg Assy 097152-01 Manual Control Valve

VANGUARD PROPANE CONVECTION & RADIANT HEATERS

Model#	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
VCP80	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 099539-02 Electrode	LPA2130	097163-01 Pilot 099679-01 Burner	LPA1000 (10ft) 3825 (25ft)	LPA3035 Hose & Reg Assy 097152-01 Manual Control Valve
VCP200	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2050	097161-01 Pilot 097162-02 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve
VCP250	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	102445-01 Piezo 097150-01 Electrode	LPA2010	097163-03 Pilot Assy 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3000 Hose & Reg Assy 097152-01 Manual Control Valve
VCP250A	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3000 Hose & Reg Assy 097152-01 Manual Control Valve
VCP275	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3000 Hose & Reg Assy 097152-01 Manual Control Valve

DESA PROPANE CONVECTION & RADIANT HEATERS

Model#	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
CP200	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2050	097163-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve
CP250	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve
DESA250	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve
CP275	099236-01 099237-01 Nut	097155-01 7111NR Power Coil	LPA4000 Piezo 097150-01 Electrode	LPA2010	097161-01 Pilot 097162-01 Burner	LPA1020 (10ft) 2525 (25ft)	LPA3060 Hose & Reg Assy 097152-01 Manual Control Valve

Scheu Gas Fired Heaters

The bestway to replace the ignition control board in your heater is to obtain the manufacturer's part number off of the top of the board for reference.

Name Brands Include:
All-Pro
Universal
Mr. Heater

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please refer to the Quick Parts Reference Parts Guide for common replacement parts.

If you need technical assistance, feel free to call **PHP Technical Service** at **1-800-362-6951 ext 2.** Whenever possible, please have your model number and the nature of your problem before you place a call for technical service. You may also email your technical service questions to us at **techservice@portableheaterparts.com.**

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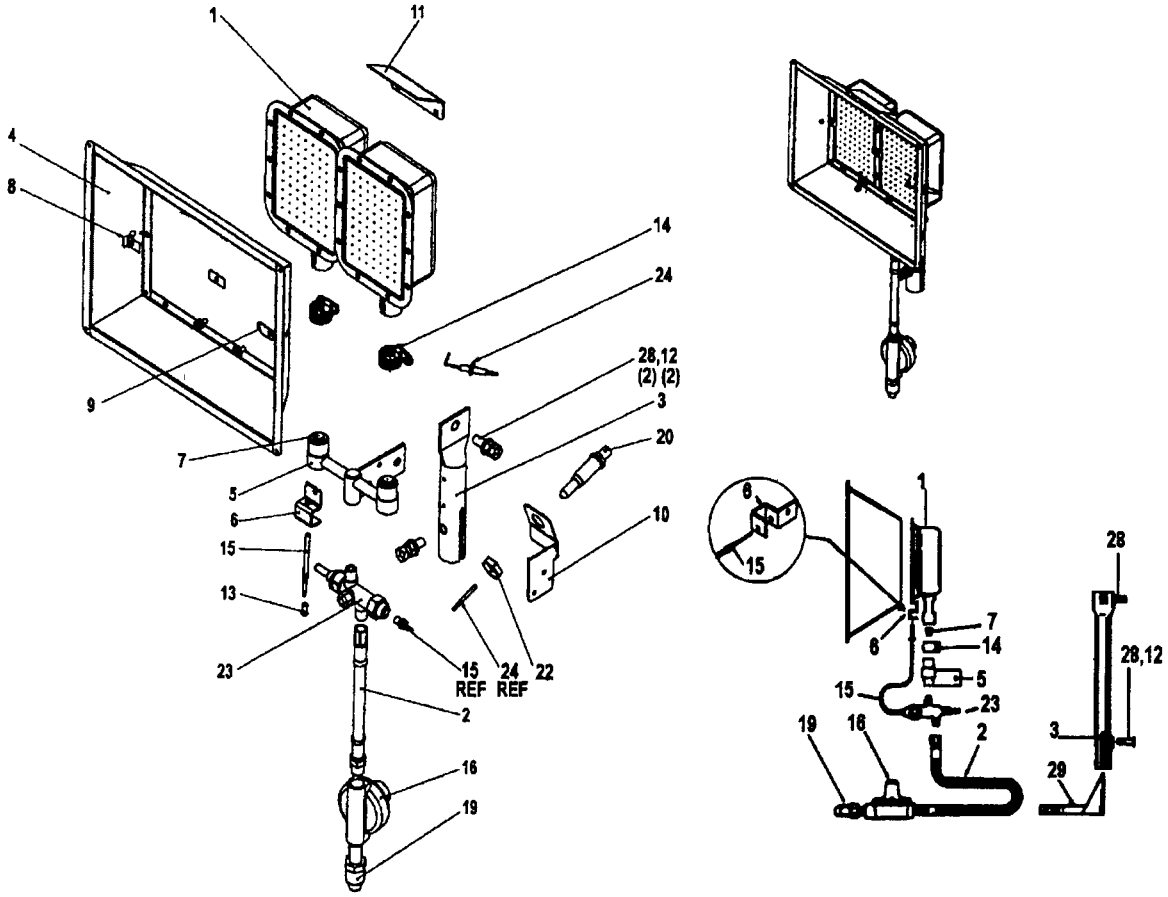
Scheu Ceramic Plaque Infrared Heaters

Model Numbers
12IR
24IR
24IRP
36IRP
48IRP



Key No.	Description	12IR Qty. 11,000 BTU		24IR Qty. 22,000 BTU		24IRP Qty. 22,000 BTU		36IR Qty. 33,000 BTU		48IR Qty. 44,000 BTU	
1	Burner Assembly w/ceramic grid	1010	1	1010	2	1010	2	1010	3	1010	4
2	Hose Assembly	1016	1	1016	1	1016	1	1016	1	1016	1
3	Support Tube Assembly	1017	1	1017	1	1017	1	1017	1	1017	1
4	Reflector Assebmly	1009	1	1019	1	1019	1	1022	1	1025	1
5	Maniforl Assembly	1014	1	1021	1	1021	1	1024	1	1027	1
6	Bracket, Thermocouple	3003	1	3003	1	3003	1	3003	1	3003	1
7	Orifice, LP #69 Drill	3008	1	3008	2	3008	2	3008	3	3008	4
8	Keeper, Grid	3017	2	3017	3	3017	2	3017	4	3017	5
9	Bracket, Electrode Ground					3645	1				
10	Bracket, Piezo Mounting					4291	1				
11	Bracket, Label					4292	1				
12	Nut, flange lock 3/8-16	6042	2	6042	2	6042	2	6042	2	6042	2
13	Clip, Thermocouple	6045	1	6045	1	6045	1	6045	1	6045	1
14	Clamp, Loop 1” Dia.	6069	1	6069	2	6069	2	6069	2	6069	2
15	Thermocouple, 12”	6233	1	6233	1	6233	1	6233	1	6233	1
16	Regulator 28”W.C. 1/4 x 3/8 FPT	6257	1	6257	1	6257	1	6257	1	6257	1
19	POL, Excess Flow 1/4MPT	6433	1	6433	1	6433	1	6433	1	6433	1
20	Piezo Igniter					6473	1				
22	Nut, Piezo					7161	1				
23	Valve, Thermoelectric	7285	1	7285	1	7285	1	7285	1	7285	1
24	Electrode					7395	1				
28	Screw, Machine 3/8-16 x 1 1/4 Grd 5	8190	2	8190	2	8190	2	8190	2	8190	2
29	Collar, Assembly, 48IR									1028	1

*	C20	20 lb. Propane Cylinder
*	C30	30 lb. Propane Cylinder
*	C40	40 lb. Propane Cylinder
*	C60	60 lb. Propane Cylinder
*	C100	100 lb. Propane Cylinder

* Not shown on exploded view.

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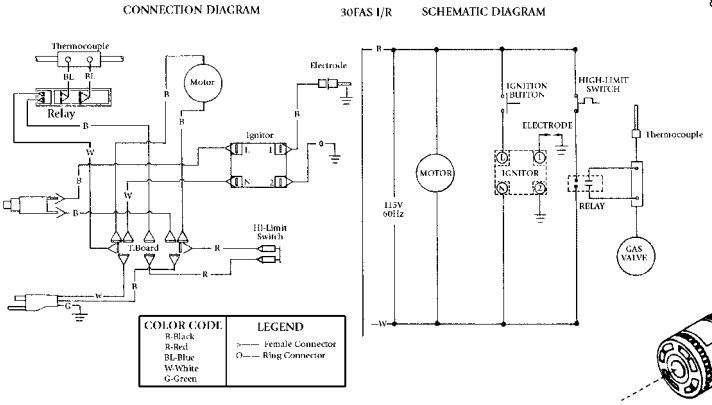
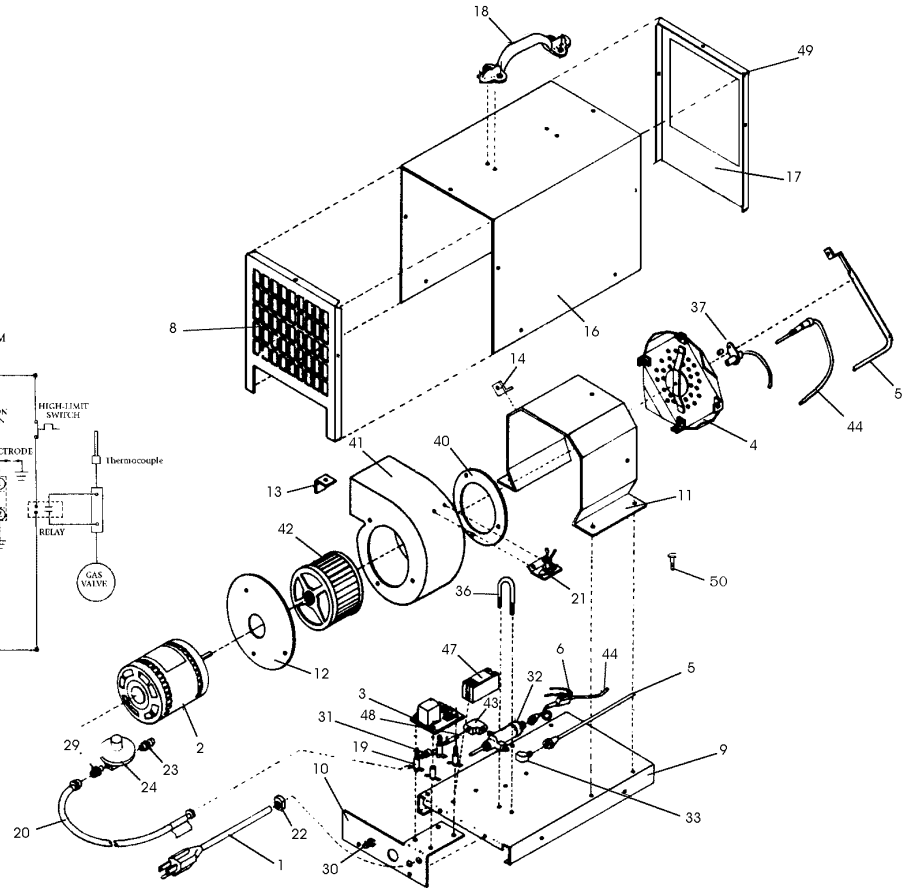
30,000 BTU Forced Air Scheu Heater

Model Numbers

Universal	AllPro
30FAS	SPC30





Key No.	Part No.	Description
1	1036NR	Power Cord Assembly
2	1368NR	Motor Assembly
3	0540NR	Relay Board Assembly - 1811NR Relay
4	1345NR	Flame Holder Assembly
5	1640NR	Fuel Tube Assembly
6	1042NR	Lead Wire Assy. Blue 6" FS x R (qty. 2)
*	1370NR	HT Wire Assy. Red 7" F x FF (qty. 2)
8	3455NR	Front Cover Assembly (30FAS)
	3486NR	Front Cover Assembly (SPC30)
9	3480NR	Base
10	3456NR	Relax Mounting Bracket, 30FAS
11	3478NR	Burner Box
12	3371NR	Motor Plate Mounting
13	3372NR	Blower Exit Bracket
14	3388NR	Blower Bracket
16	3392NR	Housing, (30FAS)
	3367NR	Housing, (SPC30)
17	3393NR	Rear Cover, Housing (30FAS)
	3369NR	Rear Cover, Housing (SPC30)
18	7095NR	Handle (Handle Clip #7094NR qty. 2)
19	6671NR	PC Standoff Nylon Spacer (qty. 4)
20	Call	LP Hose Assembly, 1/4" ID
21	6168NR	High Limit Control 240˚F
22	6223NR	Strain Relief Bushing, 5/8
23	6252NR	P.O.L. Excess Flow Check Valve
24	6255NR	Regulator, 11" W.C.
*	7492NR	Label, Fuel/Ignition
*	6369NR	Label, Warning Fuel
*	6373NR	Label, Fan Rotation
*	6374NR	Label, Electrical Grounding

Key No.	Part No.	Description
29	Call	Fitting, Bushing
30	6171NR	Switch, Push Button
31	6652NR	Fitting, Male Conn 1/4 FLR x 1/8 FPT
32	7285NR	Thermoelectric Valve
33	6566NR	Fitting, Male Elbow 1/4 FLR x 1/8 MPT
*	6916NR	Label, Universal 7"
*	6938NR	Label, All Pro
*	6712NR	Label, Hangtag LP Hose
36	6721NR	"U" Bolt, 1.25 Diameter
37	1377NR	Electrode Assembly
*	6725NR	Label Warning Start-up
*	6419NR	Label, Wiring 30FAS
40	6730NR	Blower Inlet Ring
41	6731NR	Blower Housing
42	6732NR	Blower, 3.75" CCW
43	6788NR	Fitting, Elbow 1/8 FPT x FPT
44	6803NR	Thermocouple, 13" with Junction Box
*	6811NR	Label, Model/Opr Instructions
*	6813NR	Operating Instruction Manual
47	3275NR	Ignitor Hi Lo 801 Mini
48	6823NR	Fitting Nipple 1/8 MPT x 1.5 Long
49	6825NR	Foil AL 2-3 Adhesive Back
50	N/A	Screw
*	C20	20 lb. Propane Cylinder
*	C40	40 lb. Propane Cylinder
*	7111NR	Control Valve Powercoil
*	TFI	Propane Tank Stabilizer

* Not shown on exploded view

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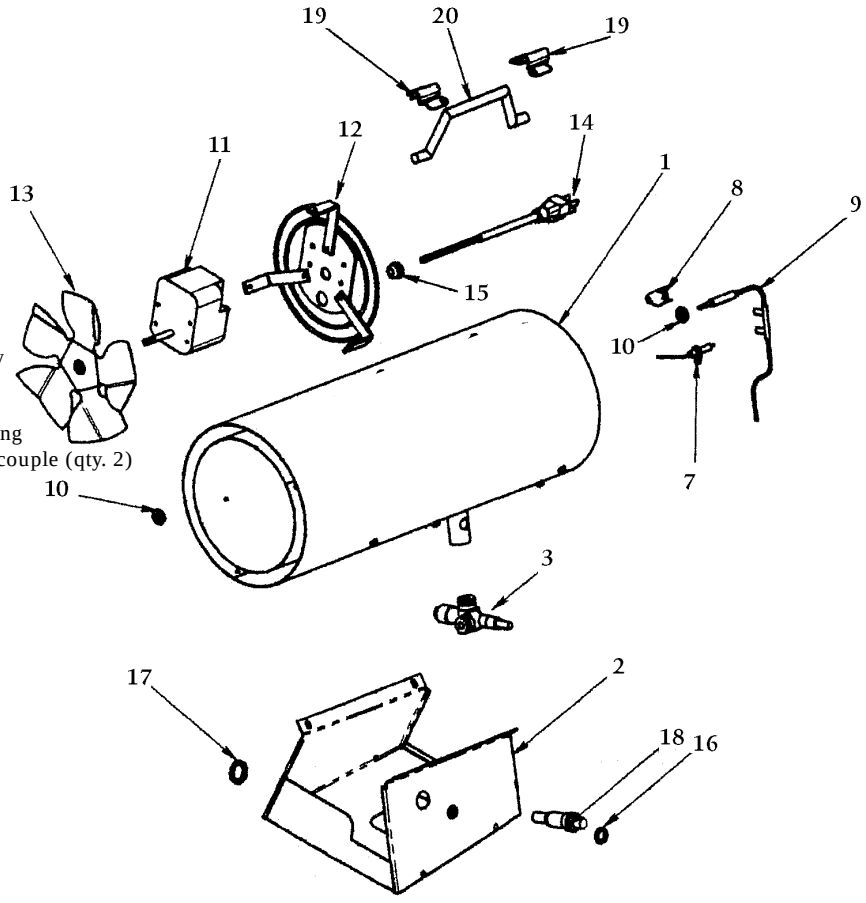
35,000 BTU Forced Air Scheu Propane Heater

Model Numbers
Scheu
SPC35

Key No.	Part No.	Description
1	10720NR	Heater Body Kit
2	2100NR	Control Box Assembly
3	8079NR	Thermocouple and Valve Assembly
7	8080NR	Electrode
8	6168NR	High Limit Switch 240˚F
9	8079NR	Thermocouple 17.5” in Fast Reacting
10	8091NR	Nut Hex M8 x 1 Fine Thd Thermocouple (qty. 2)
11	8076NR	Motor 0.74A
12	2101NR	Grille Assembly
13	8077NR	Fan Blade, 6.75 x .75 Pitch
14	2113NR	Power Cord Assembly
15	8136NR	Bush Strain Relief, .25
16	6503NR	Nut Hex 5-28 TE Valve (qty. 2)
17	7161NR	Nut, Piezo
18	6473NR	Piezo Ignitor
19	7094NR	Clip Handle (qty. 2)
20	7095NR	Handle
*	8098NR	Parts List/Wiring Diagram
*	6256NR	Regulator
*	1591NR	Hose
*	6252NR	P.O.L.
*	1007NR	Hose & Regulator Assembly
*	C20	20 lb. Propane Cylinder
*	C40	40 lb. Propane Cylinder
*	7111NR	Control Valve Powercoil
*	TFI	Propane Tank Stabilizer

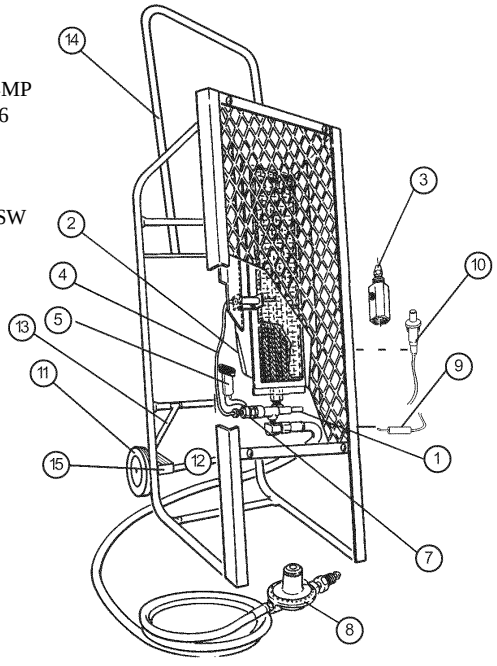
*Not shown on exploded view



35,000 BTU Scheu Propane Radiant Heater

Model Numbers
Scheu
SPC35R

Key No.	Part No.	Description
1	00333	CONT M-N SS PORT 3/8MPXI/4MP
2	02455	BURNR/LTFR PORTABLES/D1096
3	05455	ORIFICE/BURNER #55 DRILL
4	09352	THERMOCOUPLE ASSY/18”
5	09357	TIP-OVER SWITCH 6”
7	09371	JUNCTION BLK ADPTR KIT/TIPSW
8	11695	REC.L/P 21” WC OUT
9	CR705	IGNITOR, MODEL#35
10	CR735	PIEZO, MODEL#35
11	CR710	WHEEL, MODEL#35
12	CR720	AXLE, MODEL#35
13	CR715	AXLE BRACKETS, MODEL#35
14	CR725	HANDLE
15	CR730	WHEEL LOC



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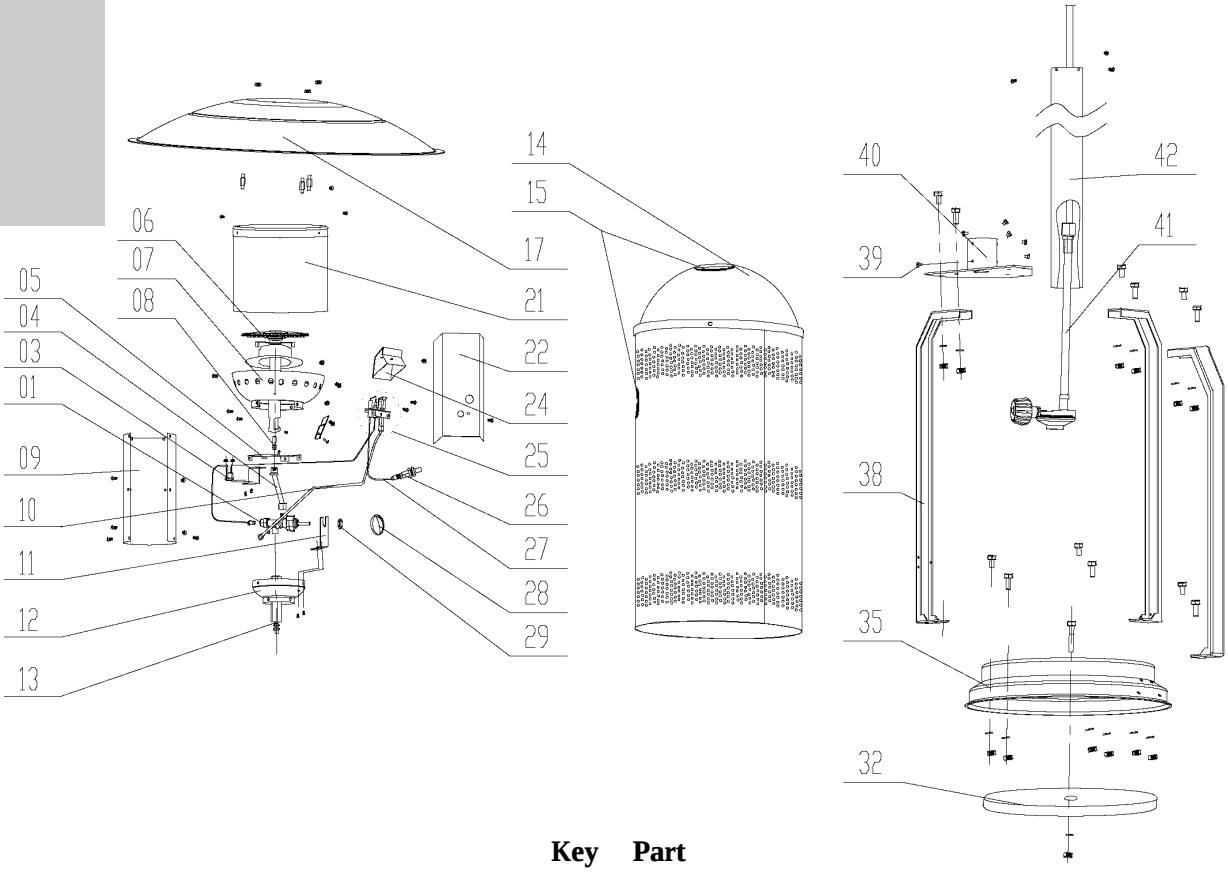
40,000 BTU Radiant Scheu Propane Heater

Model Numbers

Scheu
SPC54PHW
SPC54PHB
SPC54PHT



Key No.	Part No.	Description
1	8603NR	Valve
*	8604NR	Bolt, 1/8-40 (qty. 2)
3	8605NR	Tip Switch
4	8607NR	Fuel Tube
5	8608NR	Adiabatic Plate
6	8708NR	Mushroom Burner Assembly
7	8616NR	Burner Cover Bottom
8	8611NR	Orifice, Main Burner
9	8602NR	Valve Housing Cover
10	8600NR	Pilot Tube
11	8599NR	Bracket, Valve Mtg
12	8598NR	Valve Cover Base
13	8597NR	Fuel Line Adaptor
14	2209NR	Tank Cover Assembly (White)
	2209BNR	Tank Cover Assembly (Black)
	2209TNR	Tank Cover Assembly (Bronze)
15	8705NR	Guards, Rubber Handle
*	8567NR	Nut, M8 (qty. 6)
17	8617NR	Reflector
*	8618NR	Bolt, Bi-Convex (qty. 3)
*	8601NR	Bolt, 3/16-24 (qty. 23)
21	2241NR	Emitter Assemly
22	8573NR	Front Cover Panel
*	8574NR	Bolt, 3/16-24 (qty. 2)
24	8575NR	Shield, Pilot Wind
25	8576NR	Pilot Ass'y (electrode, pilot, thermocouple)
26	6473NR	Ignitor, piezo
27	8578NR	Ignition Wire
28	8579NR	Knob
29	8580NR	Nut - 1, G1/4

Key No.	Part No.	Description
*	8583NR	Nut, M10
*	8584NR	Lock Washer, Ø = 10
32	8585NR	Ballast Plate
*	8586NR	Nut, 1/4-20 (qty. 12)
*	8587NR	Lock Washer, Ø = 6 (qty. 12)
35	8625NR	Base (White)
	8625T NR	Base (Bronze)
	8587NR	Base (Black)
*	8589NR	Carriage Bolt
*	8590NR	Bolt, 1/4-20 (qty. 12)
38	8690NR	Base Legs (White) (qty. 3)
	8690TNR	Base Legs (Bronze)
	8591NR	Base Legs (Black)
39	8592NR	Set Screws, 1/4-20 (qty. 6)
40	8691NR	Pole Support (White)
	8691TNR	Pole Support (Bronze)
	8593NR	Pole Support (Black)
41	2242NR	Manifold (fuel line), hose, regulator
42	8626NR	Pole (White)
	8626B NR	Pole (Black)
	8626TNR	Pole (Bronze)
*	8596NR	Bolt, 3/16-24 (qty. 3)
*	8764NR	Instructions & Parts List
*	8630NR	Label, Operating Instruction
*	8628NR	Label, Model SPC-54
*	8627NR	Label, Warning
*	8692NR	Wheel Assembly
*	8698NR	Nut and Bolt Pack
*	G1851	Acme Tank Connector

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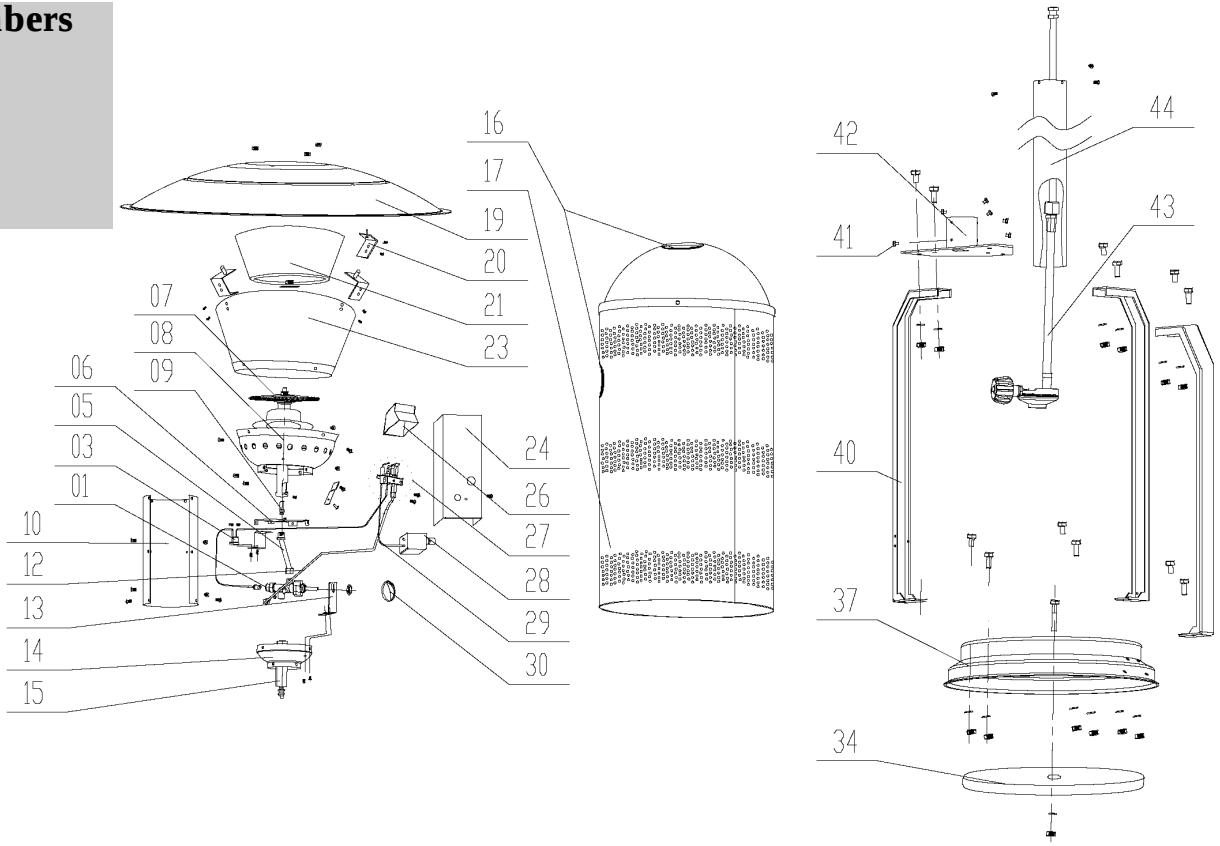
40,000 BTU Radiant Scheu Propane Heater

Model Numbers

Scheu
55PHS
SPC55S



Key No.	Part No.	Description
1	8603NR	Valve
*	8604NR	Bolt, 1/8-40 (qty. 2)
3	8605NR	Tip Switch
*	8606NR	Nut, 1/8-40 (qty. 2)
5	8607NR	Fuel Tube
6	8608NR	Adiabatic Plate
7	8609NR	Mushroom Burner Ass'y
8	8610NR	Burner Cover Bottom
9	8611NR	Orifice, Main Burner
10	8602NR	Valve Housing Cover
*	8601NR	Bolt, 3/16-24 (qty. 6)
12	8600NR	Pilot Tube
13	8599NR	Bracket, Valve Mtg
14	8598NR	Valve Cover Base
15	8597NR	Fuel Line Adaptor
16	8705NR	Guards, Rubber Handle
17	2208NR	Tank Cover Ass'y
*	8567NR	Nut, M8 (qty. 6)
19	8617NR	Reflector
20	8569NR	Reflector Support (qty. 3)
21	8570NR	Heat Insulator
*	8571NR	Bolt, 5/32-32 (qty. 6)
23	2244NR	Emitter Ass'y
24	8572NR	Front Cover Panel
*	8574NR	Bolt, 3/16-24 (qty. 2)
26	8575NR	Shield, Pilot Wind
27	8576NR	ODS Pilot Assy. (electrode, pilot, thermocouple)
28	8577NR	Pulse Ignitor
29	8578NR	Ignition Wire
30	8579NR	Knob
*	8580NR	Nut - 1, G1/4
*	8583NR	Nut, M10
*	8584NR	Lock Washer, Ø = 10
34	8585NR	Ballast Plate
*	8586NR	Nut, 1/4-20 (qty. 12)
*	8587NR	Lock Washer, Ø = 6 (qty. 12)
37	8588NR	Base
*	8589NR	Carriage Bolt
*	8590NR	Bolt, 1/4-20 (qty. 12)
40	8591NR	Base Legs 3
41	8592NR	Set Screws, 1/4-20 (qty. 6)
42	8593NR	Pole Support
43	2242NR	Manifold (fuel line, hose, regulator)
44	8595NR	Pole
*	8596NR	Bolt, 3/16-24 (qty. 3)
*	8764NR	Instructions & Parts List
*	8628NR	Label, Operating Instruction
*	8631NR	Label, Model SPC-55
*	8627NR	Label, Warning
*	8693NR	Wheel Ass'y
*	8699NR	Nut and Bolt Pack
*	G1851	Acme Tank Connector

* Not shown on exploded view

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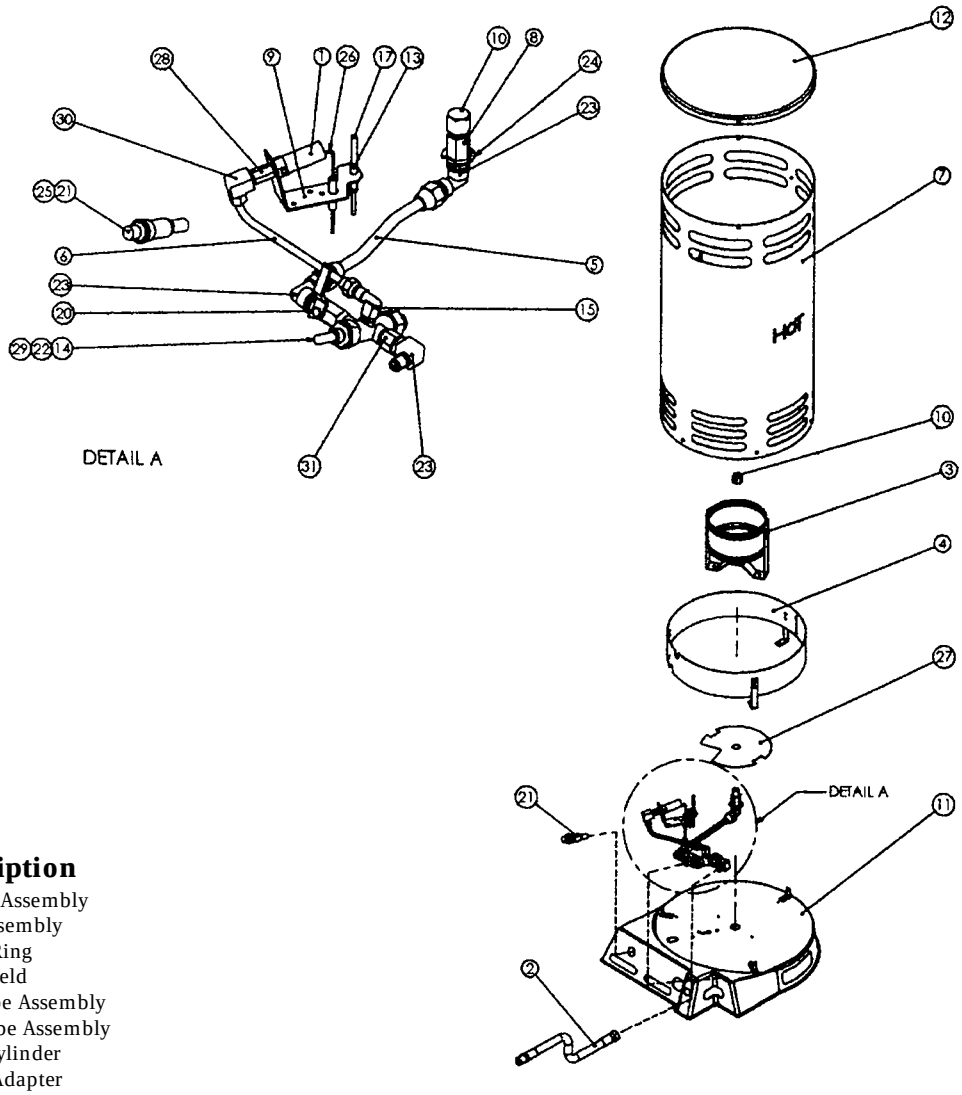
30-80,000 BTU Propane Convection Scheu Heater

Model Number

Scheu
80VCA
SPC80-VCA



Key No.	Part Number	Description
1	1510NR	Pilot LP Assembly
2	6152NR	Hose Assembly
3	1889NR	Burner Ring
4	2160NR	Ring Shield
5	2156NR	Fuel Tube Assembly
6	2157NR	Pilot Tube Assembly
7	2161NR	Outer Cylinder
8	4279NR	Orifice Adapter
9	3865NR	Bracket, Pilot Mounting
10	3557NR	Orifice, LP
11	4250NR	Base
12	4223NR	Cap
13	6045NR	Clip, TC
14	6104NR	TE Valve
15	6137NR	Ftg., Elbow Female 1/4 FLR x 1/8 FPT
*	8217NR	Manual, Operating Instructions
17	6233NR	Thermocouple
18	6433NR	POL Excess Flow
*	6568NR	Fitting, Adapter 1/4 FPT x 1/4 MPT
*	8018NR	Fitting, Elbow 1/8 FPT x 1/4 MPT
19	6255NR	Regulator
20	6269NR	Valve, Ball
21	6473NR	Piezo Ignitor
22	6503NR	Nut Hex 1/2-28 TE Valve
23	7172NR	Ftg., Elbow Femaile 1/4 FPT x 3/8 FLR (qty. 3)
24	8162NR	External Retaining Ring
25	7161NR	Piezo Nut
26	7652NR	Electrode with 7” wire
27	4293NR	Heat Shield
*	8216NR	Label, Model

Key No.	Part Number	Description
28	7157NR	Pilot Orifice
29	6689NR	Washer, Flat 9/16 SAE
30	8187NR	Ftg., Elbow 1/8 FPT x 1/4 CPSN
*	8213NR	Label, Safety Precautions
*	8214NR	Label, Start Instructions
*	8215NR	Label, Warnings
*	8218NR	Label, Safety Precautions
*	8216NR	Label, Model
*	7438NR	Label, BTU Rating
*	7111NR	Thermoelectric Valve Powercoil
*	C100	100 lb. Propane Cylinder
*	3825	25’ Gas Hose
*	6045NR	Thermocouple Nut

* Not shown on exploded view
Screws are standard hardware items

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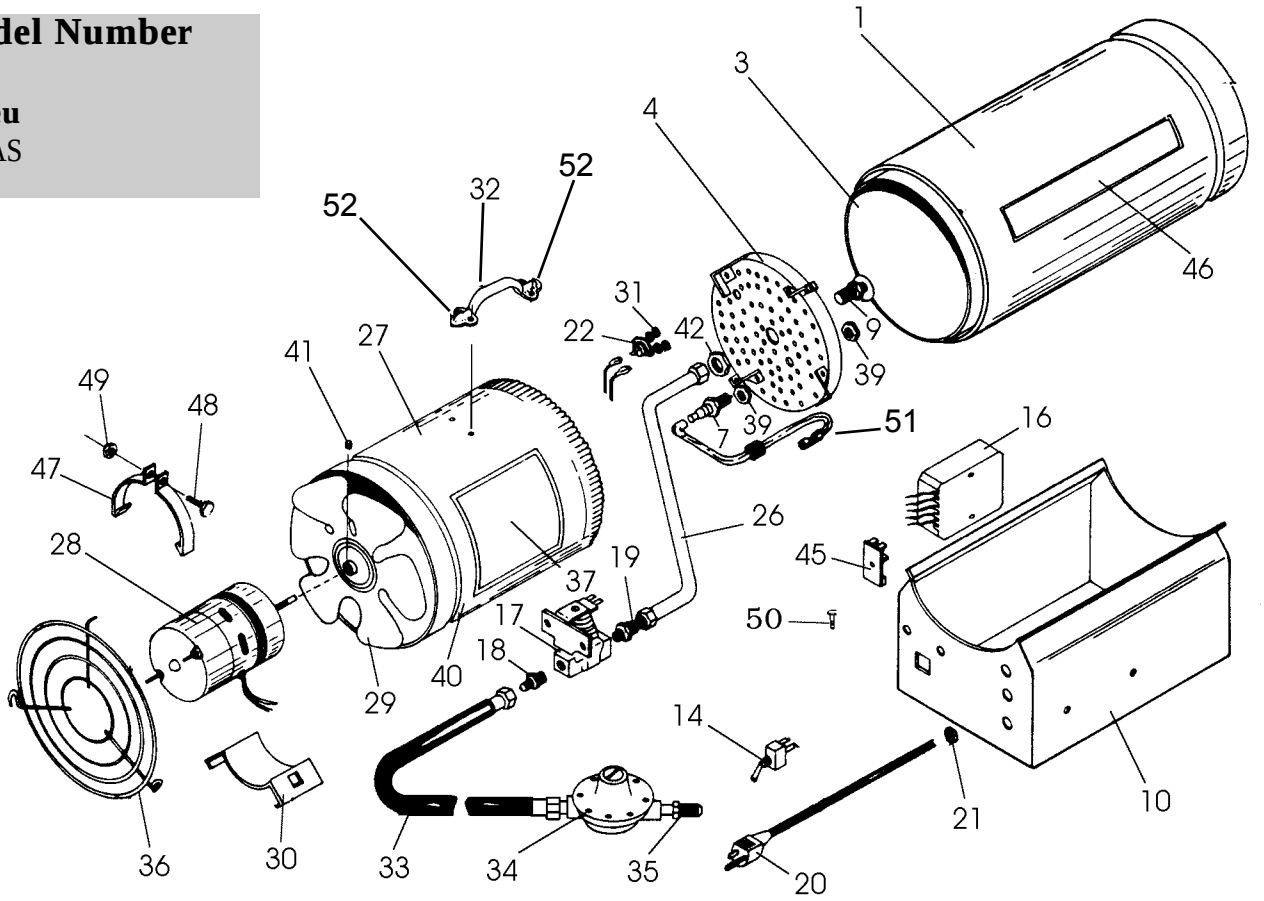
80,000 BTU Forced Air Scheu Propane Heater

Model Number

Scheu
80FAS



For wiring diagram see page. 172.

Key No.	Part Number	Description
1	1060NR	Burner Shell Assembly
3	1061NR	Middle Cylinder Assembly
4	1146NR	Flame Holder Assembly
7	1082NR	Spark Plug
9	1063NR	Orifice Assembly
10	1161NR	Control Box Assembly
14	6170NR	Toggle Switch
16	Call	DSI
17	6100NR	Solenoid Valve
18	6122NR	Fitting, 3/8" MFIR x 3/8" MPT
19	6143NR	Fitting, Male Conn, 5/16" MFLR x 3/8" MPT
20	1036NR	Power Cord Assembly
21	6223NR	Bushing, Strain Relief, 5/8"
22	6168NR	High Limit Switch, 240˚F
*	6369NR	Label, Warning, Fuel
*	6373NR	Label, Fan Rotation
*	6422NR	Label, On/Off Switch
26	1162NR	Fuel Tube Assembly
27	1371NR	Motor Shell Assembly
28	1361NR	Motor Assembly
29	6086NR	Fan
30	3132NR	Support, Motor Saddle
31	6068NR	Washer (qty. 4)
32	7095NR	Handle

Key No.	Part Number	Description
33	6152NR	Hose Assembly, 10'
34	6255NR	Regulator, 11" W.C.
35	6252NR	POL/Excess Flow Check Valve
36	3087NR	Grill
37	6364NR	Label, Model, Operating Instr.
*	6374NR	Label, Electrical Ground
39	3037NR	Nut, Spark Plug 14mm (qty. 2)
40	6995NR	Label, Wiring
41	6010NR	Set Screw, Nylock, 1/4-28
42	3038NR	Nut, Orifice 3/4-16
*	6994NR	Parts List / Wiring Diagram
*	7065NR	Label, BTU
45	6444NR	Terminal Board
46	6383NR	Label, Universal Logo
47	3133NR	Support, Motor Strap (qty. 2)
*	6332NR	Manual, Operating Instructions
*	6712NR	Label, Hangtag, Hose
48	6030NR	Screw, Machine 5/16"-18 x 1 Hex Head
49	6041NR	Nut Lock 5/16 x 18
*	7094NR	Clip, Handle
50	NLA	Screw (qty. 2)
51	1362NR	Wire Ign Assy (11in)
52	7094NR	Handle Clip (qty. 2)
*	C100	100# L.P. Bottle
*	KT121	Thermostat, warmer-cooler dial
*	HA1210	Thermostat with degrees on dial
*	3825	3/8" x 25' Hose

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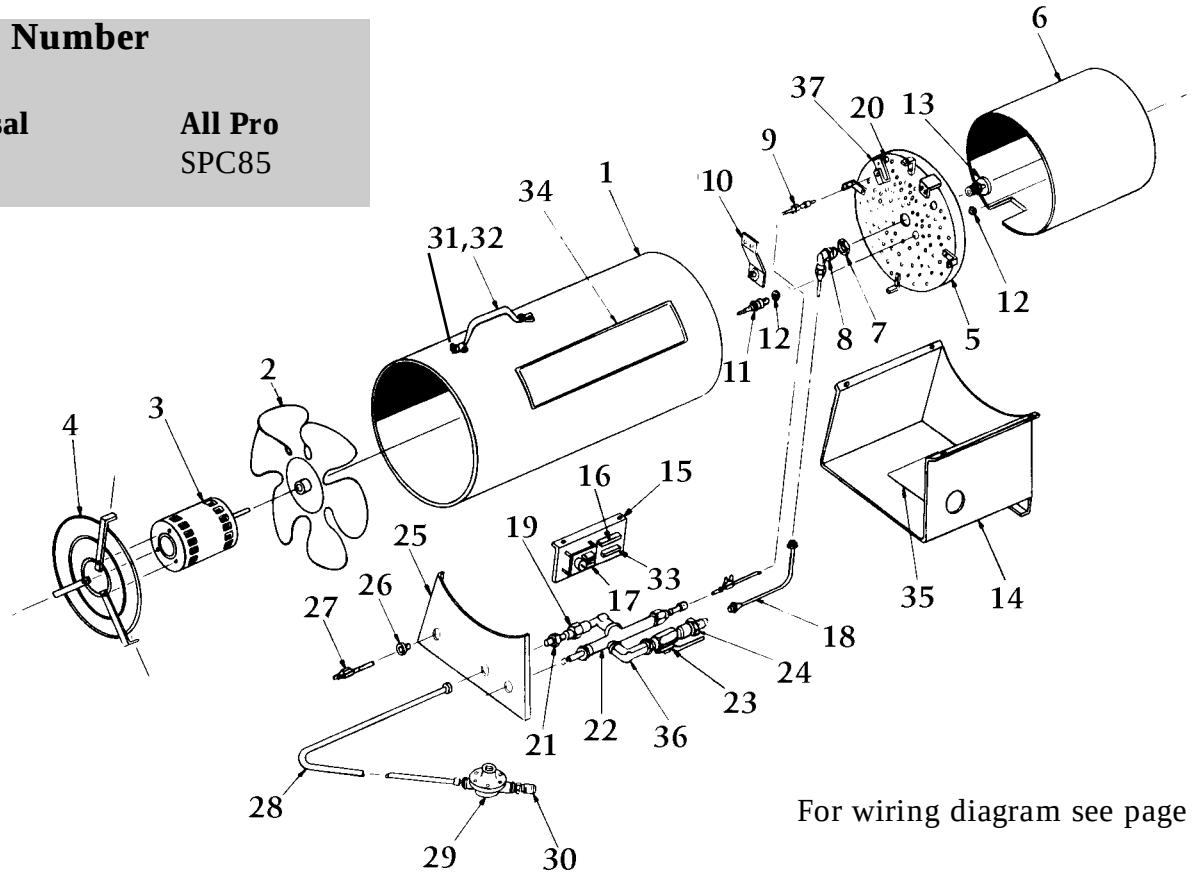
50-80,000 BTU Forced Air Scheu Propane Heater

Model Number

Universal	All Pro
85FAC	SPC85



For wiring diagram see page 171.

Key No.	SPC-85 Part No.	85-FAC Part No.	Description	Item	SPC-85 Part No.	85-FAC Part No.	Description
1	1670NR	1730NR	Cylinder, Outside Assy.	24	7405NR	7405NR	Fitting, Female Conctr
2	6086NR	6086NR	Fan, 7 inch	25	3690NR	3690NR	Control Panel Assy
3	1551NR	1551NR	Motor Assembly, 80-FAS	26	6223NR	6223NR	Strain Relief Bushing
4	1671NR	1671NR	Grille, Motor Mtg	27	1036NR	1036NR	Power Cord
5	1750NR	1750NR	Flame Holder Assy	28	6152NR	6152NR	Hose Assembly
6	1674NR	1674NR	Cylinder, Middle Assy	29	6257NR	6257NR	Regulator 28” W.C.
7	3038NR	3038NR	Nut, Orifice Mounting	30	6433NR	6433NR	POL Excess Flow
8	7433NR	7433NR	Fitting, Male Elbow	31	7094NR	7094NR	Clip Handle Mounting
9	6654NR	6654NR	Thermocouple	32	7095NR	7095NR	Handle
10	1751NR	1751NR	High Limit Control Assy	33	1811NR	1811NR	Relay
11	1083NR	1083NR	Spark Plug	34	6752NR	6383NR	Label, Logo
12	3037NR	3037NR	Nut-Spark Plug (qty. 3)	35	7503NR	7503NR	Label, Wiring
13	1673NR	1673NR	Orifice Assembly	36	6265NR	6265NR	Fitting Elbow (qty. 2)
14	1752NR	1752NR	Control Box Assembly	37	3036NR	3036NR	Bracket, TC
15	3044NR	3044NR	Ignition Relay Bracket	*	7385NR	7385NR	Manual,Operating Inst.
16	6641NR	6641NR	Terminal Board	*	7450NR	7450NR	Label , Model
17	3275NR	3275NR	Spark Ignition, 115V	*	7451NR	7451NR	Label, Operating Inst
18	1668NR	1668NR	Fuel Tube Assembly	*	7432NR	7432NR	Label, BTU Rating (qty. 2)
19	6133NR	6133NR	Fitting, Coupling	*	6374NR	6374NR	Label, Elec.Grounding
20	3787NR	3787NR	Spacer, TC Bracket	*	7491NR	7491NR	Label, Fuel Ignition
21	6127NR	6127NR	Fitting, Male Connector	*	3825	3825	3/8”x25’ Hose
22	7285NR	7285NR	TE Valve	*	C100	C100	100 lb. L.P. Bottle
23	7404NR	7404NR	Ball Valve, Variable Rate				

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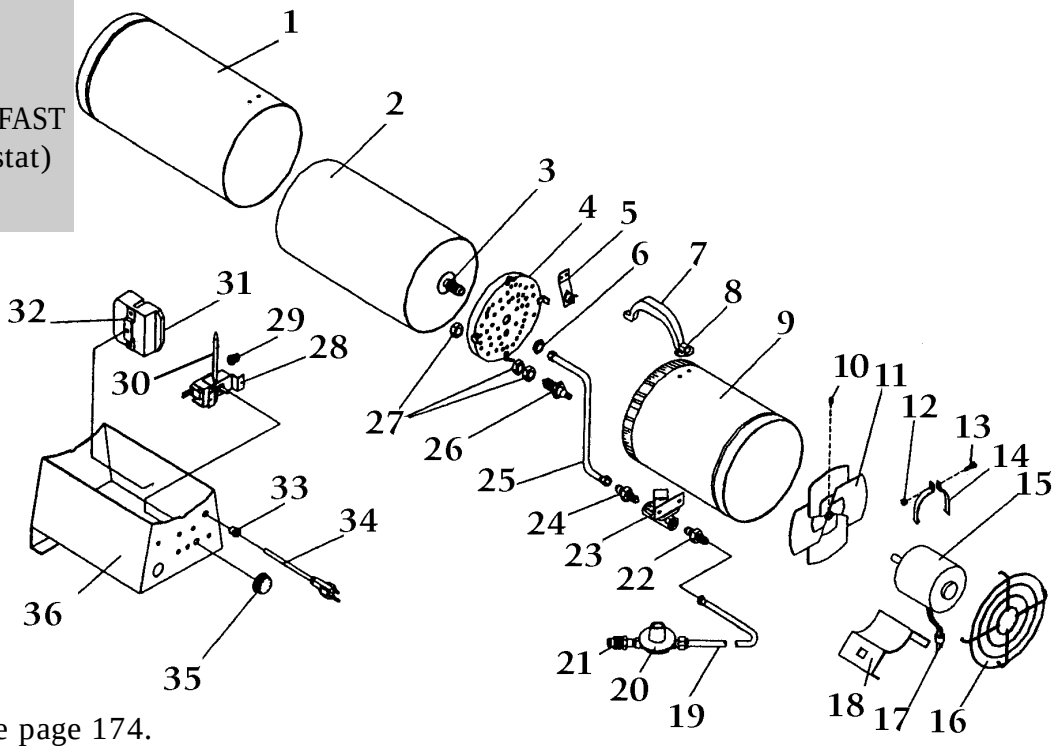
150,000 BTU Forced Air Scheu Propane Heater

Model Number

Universal	**All Pro**
150FAST	SPC150FAST

(with built-in thermostat)



For wiring diagram see page 174.

Key No.	Part No.	Description
1	1700NR	Burner Shell Assembly (150FAST)
	1712NR	Burner Shell Assembly (SPC150FAST)
2	1672NR	Middle Cylinder Assembly
3	1168NR	Orifice Assembly
4	1146NR	Flame Holder Assembly
5	1550NR	High Limit Control Assembly
6	3038NR	Nut, Orifice
7	7095NR	Handle
8	7094NR	Handle Mounting Clip (qty. 2)
9	1939NR	Motor Shell Assembly (150FAST)
	1940NR	Motor Shell Assembly (SPC150FAST)
10	6010NR	Set Screw, Nyloc
11	6074NR	Fan
12	6041NR	Nut, Lock
13	6030NR	Screw, Machine
14	3133NR	Support, Motor Strap (qty. 2)
15	1561NR	Motor Assembly
16	3087NR	Grille Inlet
17	6225NR	Snap Bushing, 5/8”
18	3132NR	Saddle, Motor Support
19	6152NR	Hose Assembly
20	6255NR	Regulator, 11” WC
21	6433NR	POL Excess Flow
22	6122NR	Fitting, Male Connector
23	6100NR	Solenoid Valve
24	6123NR	Fitting, Male Connector
25	1171NR	Fuel Tube Assembly
26	1083NR	Spark Plug

Key No.	Part No.	Description
27	3037NR	Nut, Spark Plug 14 mm (qty. 3)
28	3441NR	Thermostat Mounting Bracket
29	6070NR	Clamp Loop, 5/16
30	1734NR	Thermostat Assembly
31	M51605-02	DSI Control, 10N-117-3-8.5-8.5-Q012
	7499NR	White or Gray Ram 1M5-01
	7801NR	Black gaslighter, 4 wire
	7808NR	Black gaslighter, Potted, 4 wire
32	3333NR	Flame Control Bracket (7499)
	3210NR	Bracket (M51605-02)
	3983NR	Bracket (7801NR,7808NR)
33	6223NR	Bushing, Strain Relief, 1/4
34	1036NR	Power Cord Assembly
35	1942NR	Thermostat Knob Assembly
36	1937NR	Control Box Assembly
*	5189NR	Terminal, “Y” Adaptor (qty. 2)
*	6712NR	Label, Hangtag
*	7744NR	Label, Operating Instructions
*	6374NR	Label, Electrical Ground
*	7789NR	Label, Wiring Diagram
*	7067NR	Label, BTU Rating (qty. 2)
*	6383NR	Label, Logo (150FAST) (qty. 2)
*	6752NR	Label, Logo (SPC150FAST) (qty. 2)
*	7743NR	Manual, Operating Instructions
*	6410NR	Label, Thermostat
*	6641NR	Terminal Board (7801NR,7808NR)
*	3825	3/8” x 25' Hose
*	C100	100 lb. Porpane Cylinder

* Not shown on exploded view

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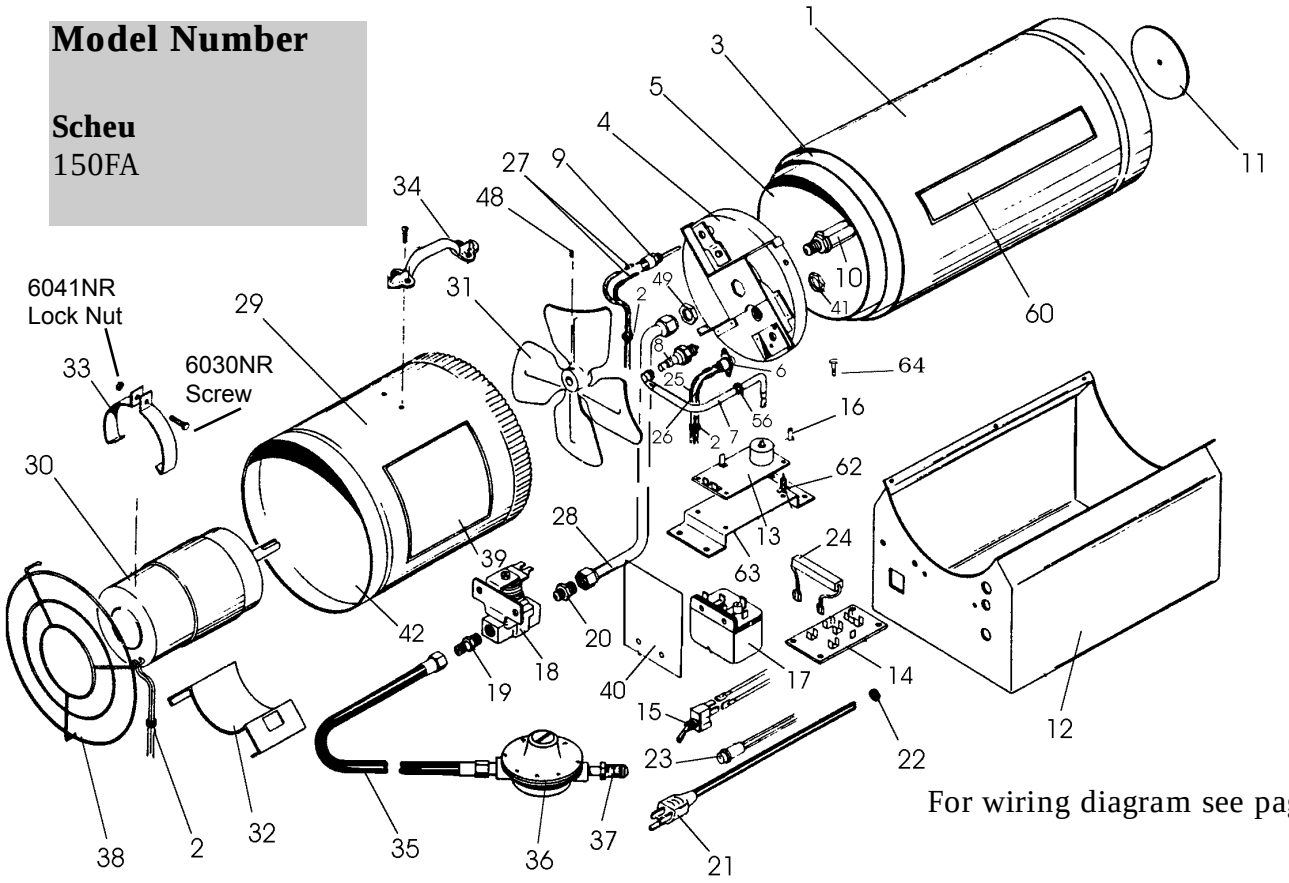
150,000 BTU Forced Air Scheu Propane Heater

Model Number

Scheu
150FA



For wiring diagram see page 172.

Key No.	Part No.	Description
1	1078NR	Burner Shell Assembly
2	6225NR	Grommet, 5/8"(qty. 4)
3	3750NR	Middle Liner Assembly
4	1080NR	Burner Intake Assembly
5	NLA	Combustion Chamber Assembly
6	6168NR	High Limit Switch, 240˚F
7	1111NR	Wire Assembly, Spark Plug
8	1083NR	Spark Plug, 1/8" Gap
9	6169NR	Flame Sensor
10	3122NR	Orifice, w/Retaining Ring
11	3124NR	Flame Spreader
12	N/A	Control Box Assembly
13	See Key #17	
14	6244NR	Terminal Board
15	6170NR	Toggle Switch
16	6065NR	Spacer
17	10742NR	Conversion Kit
18	6100NR	Gas Valve
19	6122NR	Male Connector, 3/8" MPT x 3/8" Flare
20	6123NR	Male Connector, 3/8" MPT x 1/2" Flare
21	1036NR	Power Cord Assembly
22	6223NR	Power Cord Grommet (qty. 2)
23	1089NR	Amber Light Assembly
24	1090NR	Resistor Assembly
25	1226NR	Wire Assembly, Limit Switch, Red
26	1153NR	Wire Assembly, Limit Switch, Black
27	1044NR	Wire Assembly, Flame Sensor, White (qty. 2)
28	1099NR	Fuel Line Assembly
29	1096NR	Motor Shell Assembly
30	1166NR	5 Wire Motor Assembly, 1/12hp, 3000rpm
31	6074NR	Fan Blade w/Set Screw
32	3132NR	Saddle, Motor
33	3133NR	Strap, Motor (qty. 2)

Key No	Part No	Description
34	7095NR	Handle (#7094NR Handle Clip qty. 2)
35	6152NR	Hose Assembly, 10'
	3825NR	3/8" x 25' Hose
36	6255NR	Regulator
37	6252NR	POL/Excess Flow Check Valve
38	3087NR	Grill, Inlet
39	6423NR	Label, Model Plate w/Instruction
40	3129NR	Rain Shield, Plastic
41	3037NR	Nut, Spark Plug,14mm
42	6389NR	Label, Wiring Diagram
*	6422NR	Label, On/Off Switch
*	6044NR	Locknut, Switch
*	6185NR	Terminal, U Adapter, 1/4"
*	1109NR	Wire Assembly, Black, Ignitor
*	1110NR	Wire Assembly, Green, Ignitor
48	6010NR	Set Screw, 1/4-28 Nylock
49	3038NR	Nut, Orifice 3/4-16
*	1100NR	Wire Assembly, White, Valve
*	1101NR	Wire Assembly, Grey, Toggle Switch
*	1102NR	Wire Assembly, Blue, Valve
*	1103NR	Wire Assembly, Purple, Relay
*	1104NR	Wire Assembly, Orange, Relay
*	1100NR	Wire Assembly, White, Ignitor
56	6226NR	Grommet, Spark Plug Wire
60	6383NR	Label, Universal Trademark
62	6079NR	Standoff (qty. 4)
63	3128NR	Support, Ignitor
*	6369NR	Label, Safety
*	6373NR	Label, Fan Rotation
*	6374NR	Label, Electrical Grounding
*	KT121	Thermostat
*	C100	100 lb. L.P. Bottle

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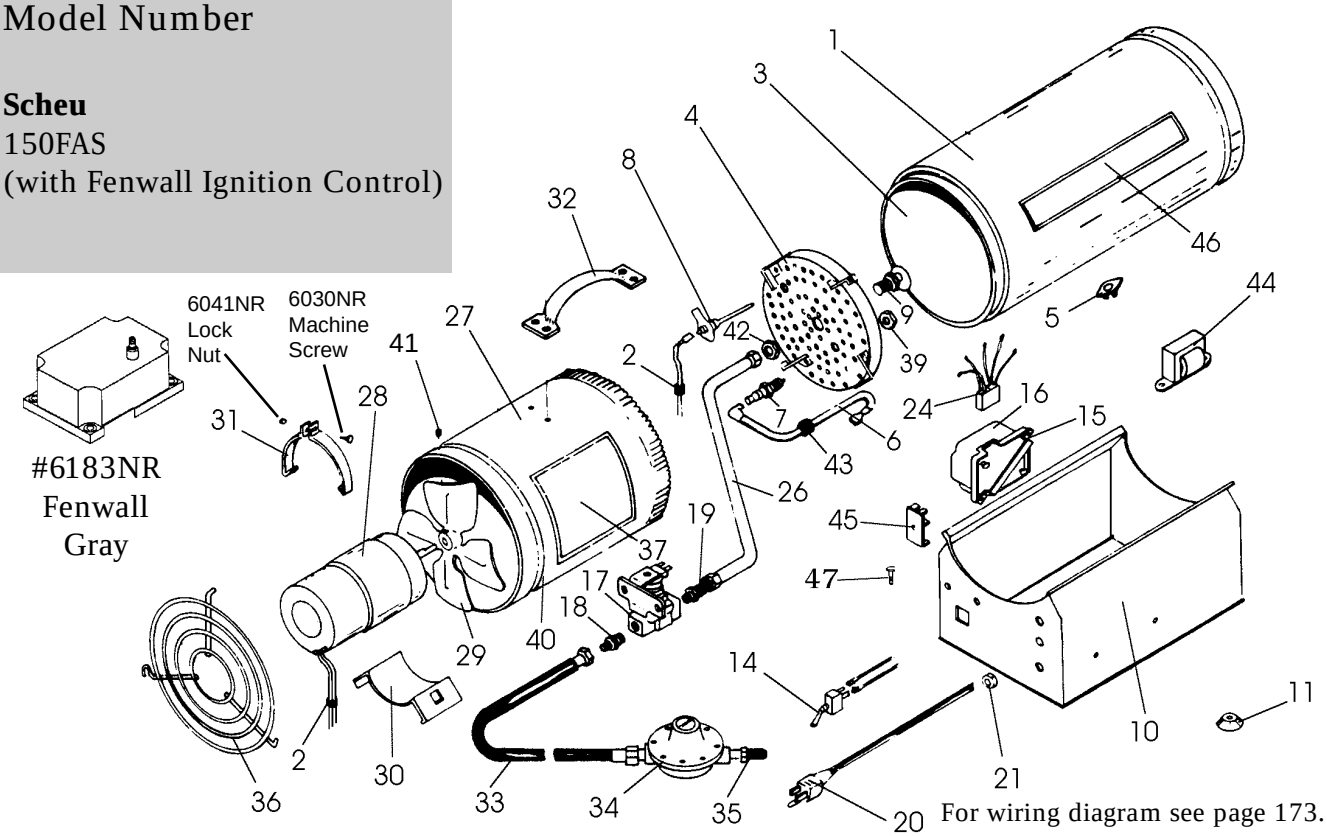
150,000 BTU Forced Air Scheu Propane Heater

Model Number

Scheu
150FAS
(with Fenwall Ignition Control)



For wiring diagram see page 173.

Key No.	Part No.	Description
1	1078NR	Burner Shell
2	6225NR	Grommet, 5/8" (qty. 2)
3	1672NR	Combustion Chamber Assembly
4	1146NR	Flame Holder Assembly
5	6168NR	High Limit Switch, 240˚F
6	1154NR	Wire Assembly, Spark Plug
7	1082NR	Spark Plug
8	6172NR	Flame Rod
9	1168NR	Orifice Assembly
10	1167NR	Control Box Assembly
11	6576NR	Rubber Bumper Feet (qty. 2)
14	6170NR	Toggle Switch
15	3210NR	Bracket, Flame Control
16	10741NR	Ignition Control
17	6100NR	Solenoid Valve
18	6122NR	Fitting Male Connector 3/8" FLR x 3/8" MPT
19	6123NR	Fitting Male Connector 1/2" Flare x 3/8" MPT
20	1036NR	Power Cord Assembly
21	6223NR	Bushing, Strain Relief, 5/8" (Power Cord)
*	6369NR	Label, Warning Fuel
*	6373NR	Label, Fan Rotation
24	1160NR	Wire Harness, Flame Control (For 6183NR Fenwal Only)
26	1171NR	Fuel Tube Assembly
27	1096NR	Motor Shell Assembly
28	1166NR	Motor Assembly - 5 Wire
29	6074NR	Fan
30	3132NR	Saddle, Motor Support
31	3133NR	Strap, Motor Support (qty. 2)
32	7095NR	Handle (# 7094NR Handle Clip qty. 2)
33	6152NR	Hose
	3825	3/8" x 25' Hose
34	6255NR	Regulator, 11" W.C.
35	6252NR	POL/Excess Flow Check Valve
36	3087NR	Grill
37	6423NR	Label, Model/Operating Instructions
*	6374NR	Label, Electrical Ground
39	3037NR	Nut, Spark Plug, 14mm
40	NLA	Label, Wiring
41	6010NR	Set Screw, Nylock 1/4-28
42	3038NR	Nut, Orifice, 3/4-16
43	6226NR	Bushing, Universal, 5/8" (Spark Wire)
44	1145NR	Transformer Assembly
45	6444NR	Terminal Board
46	6383NR	Label, Logo
*	6386NR	Label, On/Off Valve
*	6422NR	Label, On/Off Switch
*	6044NR	Locknut, Switch, 15/32-32
*	HA1210	Thermostat w/temp on dial
47	N/A	Screw
*	C100	100 lb. Propane Cylinder
*	KT121	Thermostat Warmer/Cooler

* Not shown on drawing.

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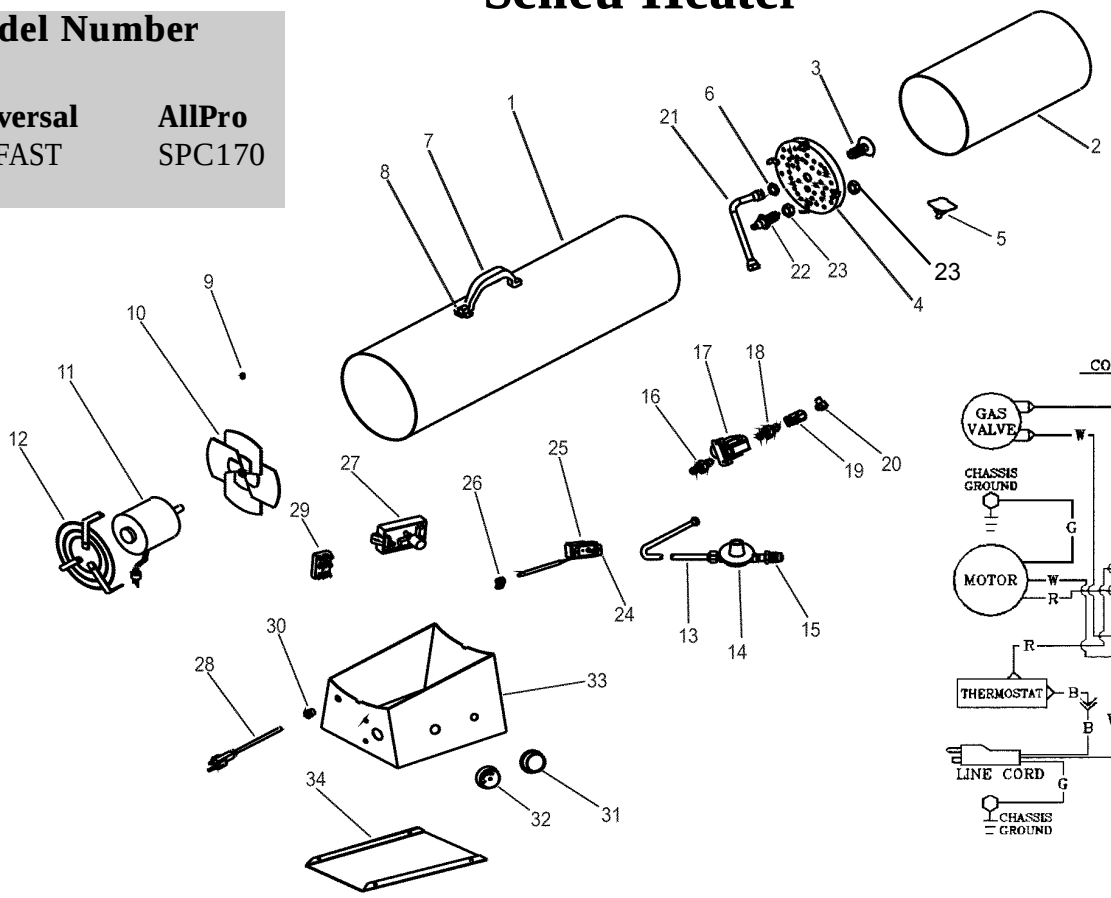
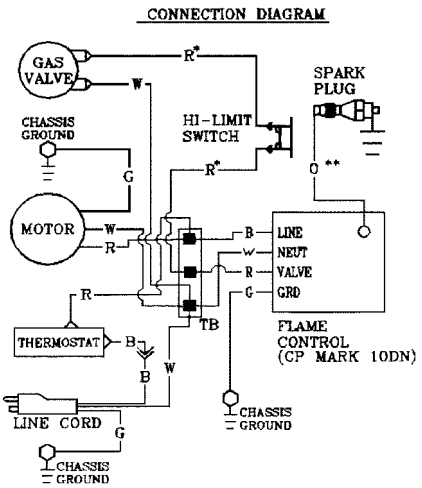
125-170,000 BTU Forced Air Propane Scheu Heater

Model Number

Universal	AllPro
170FAST	SPC170





Key No.	Part No.	Description
1	2247NR	Outer Shell -Universal (Red)
	2248NR	Outer Shell - All Pro (Orange)
2	2249NR	Middle Cylinder
3	2250NR	Orifice Assembly
4	1146NR	Flame Holder Assembly
5	6168NR	High Limit Switch
6	3038NR	Orifice Nut
7	7095NR	Handle
8	7094NR	Handle Mounting Clips (qty. 2)
9	6010NR	Set Screw, Nyloc
10	6074NR	Fan
11	2251NR	Motor Assembly
12	2252NR	Grille, Inlet/Motor Mounting
13	6152NR	Hose Assembly
14	6257NR	Regulator, 28" WC
15	6433NR	POL Excess Flow Valve
16	6122NR	Male Fitting Conn. 3/8MPT x 3/8SAE FLR
17	6101NR	Solenoid Valve, Goyen
18	8775NR	Fitting Close Nipple
19	8777NR	Burn Rate Adjustment Valve
20	8776NR	Fitting, Elbow, 3/8MPT x 1/2 SAE FLR
21	2253NR	Fuel Tube Assembly
22	8774NR	Spark Plug, Flame Sensor
23	3037NR	Spark Plug Nut (qty. 2)
24	4340NR	Thermostat Mounting Bracket

Key No.	Part No.	Description
25	2254NR	Thermostat Assembly
26	6070NR	Loop Clamp, 5/16
27	7808NR	Flame Control, Potted
28	1036NR	Power Cord Assembly
29	8771NR	Terminal Board
30	6223NR	Bushing Strain Relief
31	1507NR	Knob, Thermostat
32	8773NR	Knob, Burn Rate Adjustment
33	2255NR	Control Box
34	2256NR	Base, Control Box
*	8769NR	Label, Safety Precautions
*	8755NR	Label, General Hazard Warning
*	8733NR	Label, Model
*	8731NR	Label, Operating Instructions
*	6410ANR	Label, Thermostat Warning
*	7704NR	Label, Warning Massachusetts
*	6374NR	Label, Warning Electrical
*	7789NR	Label, Wiring Schematic
*	8203NR	Label, Hang Tag
*	8679NR	Label, BTU 170,000
*	8770NR	Manual, Operating Instructions
*	6225NR	Snap Bushing, 5/8 (qty. 2)
*	C100	100 lb. Propane Cylinder (qty. 2)
*	1630RU	30” Propane Tank Pigtail
*	P400	T-Block Manifold

* Item not shown on exploded view

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75-200,000 BTU Convection Scheu Propane Heater

Model Number

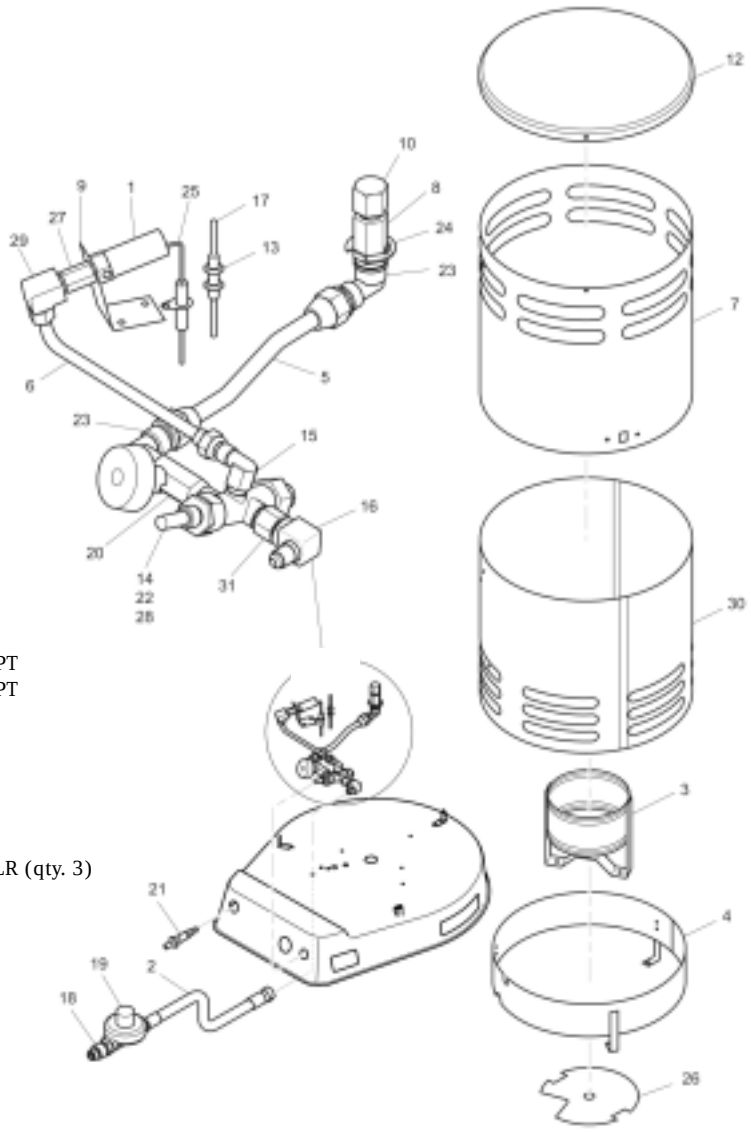
Scheu
200C - Universal
SPC200C - All Pro

Key No.	Part No.	Description
1	113814-01	Pilot Assembly
2	113815-01	Hose Assembly, 10 foot
3	113777-01	Burner Ring Assembly
4	113778-01	Ring Shield
5	113779-01	Fuel Tube Assembly
6	113780-01	Pilot Tube Assembly
7	113781-01	Upper Shell
8	113782-01	Orifice Adapter
9	113783-01	Bracket, Pilot Mounting
10	113816-01	Orifice, LP
11	**	Base
12	113875-01	Cap
13	113876-01	Thermocouple Clip
14	113787-01	Control Valve
15	113788-01	Female Elbow Fitting, 1/4 FLR x 1/8 FPT
16	113789-01	Female Elbow Fitting, 1/4 FLR x 1/4 FPT
17	113790-01	Thermocouple
18	113818-01	POL, Excess Flow
19	113819-01	Regulator
20	113793-01	Ball Valve
21	102445-01	Piezo Ignitor
22	113794-01	Valve Nut, 1/2-28
23	113795-01	Female Elbow Fitting, 1/4 FPT x 3/8 FLR (qty. 3)
24	113796-01	Retaining Ring
25	113797-01	Ignitor Electrode
26	113798-01	Heat Shield
27	113799-01	Pilot Ori•ce
28	113800-01	Washer, Flat
29	113801-01	Elbow Fitting, 1/8 FPT x 1/4 CPSN
30	113821-01	Lower Shell
31	113812-01	Fitting, 1/4 FPT x 1/4 MPT

PARTS AVAILABLE - NOT SHOWN

113809-01	Ball Valve Knob
113810-01	Ball Valve Knob Insert
113822-03	Tradename Decal, Reddy
113822-04	Tradename Decal, Master
113822-07	Tradename Decal, All-Pro
113822-08	Tradename Decal, Universal
113822-10	Tradename Decal, Remington
113808-01	Hang Tag (English)
113808-02	Hang Tag (Spanish)
113808-03	Hang Tag (French)
113805-01	Installation Decal (English)
113805-02	Installation Decal (Spanish)
113805-03	Installation Decal (French)
113802-18	Model Decal

*Items not shown on exploded view
**Not a field replaceable part.
Screws Are Standard Hardware Items



Output Rating	75-200,000 BTU/Hr
Fuel	Propane Vapor
Manifold Pressure	10 PSIG
Orifice Size	.0320”

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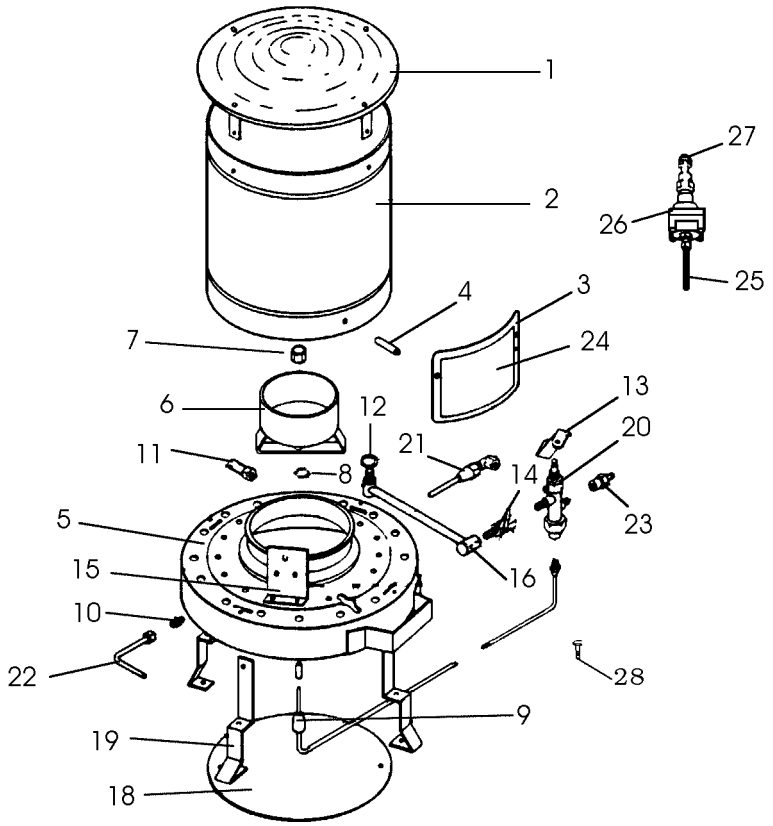
250,000 BTU Convection Scheu Propane Heater

Model Number

Universal
250
(older version)

Stone
LP100



Key No.	Part No.	Description
1	1547NR	Hood and Arm Assembly
2	3348NR	Body Shell
3	3156NR	Instruction Plate
4	6066NR	Spacer (qty. 2)
5	1000NR	Base (without burner ring)
6	1001NR	Burner Ring Assembly
7	3145NR	Orifice, #64 Drill
8	6054NR	Lock Washer, 9/16"
9	6233NR	Thermocouple, 12", w/speed clip (6045NR)
10	3140NR	Orifice, Pilot Burner
11	1004NR	Pilot Assembly (without orifice)
12	1087NR	Manifold
13	3147NR	Support Bracket, Valve
14	6269NR	Main Burner Valve (Shut Off Valve)
15	NLA	Assembly Pilot Burner Mounting
16	6386NR	Label, On/Off
18	NLA	Radiation Shield
19	3151NR	Leg (qty. 4)

Key No.	Part No.	Description
20	6104NR	Valve, Safety Pilot (*Replacement Power Coil for Valve - 7111NR)
21	6137NR	Elbow, Brass 1/8" FPT x 1/4" Flare
22	1005NR	Pilot Tube
23	3141NR	Female Connector, 1/4" FPT x 1/4" Flare
24	7180NR	Label, Instruction & Model Plate
25	6151NR	1/4" x 10' Hose
	2525	1/4" x 25' Hose
26	6256NR	Regulator, 10 psi
27	6252NR	POL/Excess Flow Check Valve
*	6323NR	Instruction Manual
*	6369NR	Label, Safety
28	N/A	Screw
*	C100	100 lb. Propane Cylinder (qty. 2)
*	P400	Propane Tank Manifold
*	1630RU	30” Propane Tank Pigtail

* Not shown on exploded view.
Screws Are Standard Hardware Items

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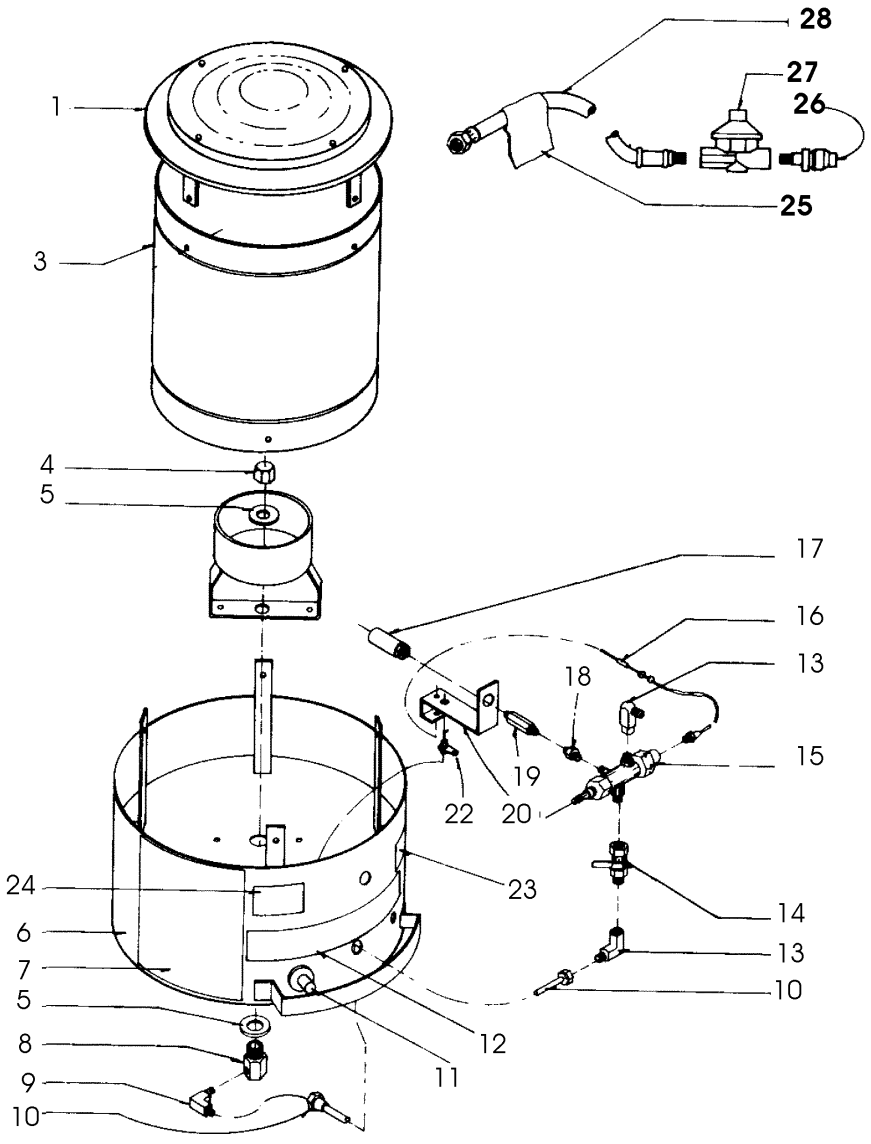
75-200,000 BTU Convection Scheu Propane Heater

Model Number

Universal
250
250A



Key No.	Part No.	Description
1	1530NR	Hood Assembly
3	3348NR	Outer Shell
4	3145NR	Orifice
5	6689NR	Flat Washer (qty. 2)
6	1525NR	Base Assembly
7	7163NR	Operating Instructions (250A)
7	7180NR	Operating Instructions (250)
8	7012NR	Fitting, Orifice Mtg
9	6566NR	Fitting, Male Elbow
10	1523NR	Fuel Tube Assembly
11	6473NR	Piezo Ignitor (250A only) (#7161NR Piezo Nut)
12	7181NR	Label, Model
13	6138NR	Fitting, Female Elbow (qty. 2)
14	6269NR	Valve, Ball
15	6104NR	TE Valve (Power Coil for Valve #7111NR)
16	6233NR	Thermocouple (#6045NR Thermocouple Clip)
17	1004NR	Pilot, LP Assembly
18	6714NR	Fitting, Coupling
19	6716NR	Orifice
20	3550NR	Pilot, TC Bracket
22	7160NR	Electrode w/ Wire (250A only)
23	7177NR	Label, BTU Rating
24	6369NR	Label, Warning Fuel
25	6712NR	Label, Hangtag, LP Hose
26	6252NR	POL Excess Flow
27	6256NR	Regulator
28	1591NR	Hose Assembly, LP
*	C100	100 lb. Propane Cylinder (qty. 2)
*	P400	Propane Tank Manifold
*	1630RU	30” Propane Tank Pigtail

Type of Gas	For use with Propane Only
Input Rating	75,000-250,000 BTU/hr
Manifold Pressure	10 psig
Orifice Size	No. 64 Drill - 6 Holes

* Not Shown
Screws Are Standard Hardware Items

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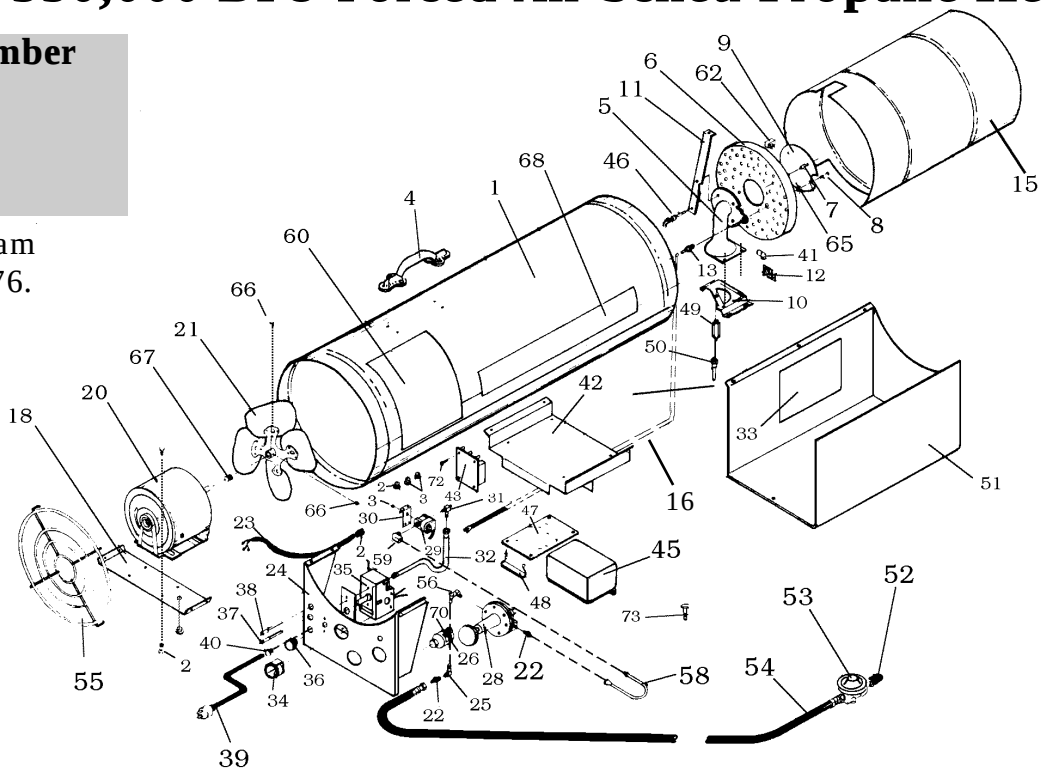
175-350,000 BTU Forced Air Scheu Propane Heater

Model Number

Universal
3500FA

Wiring diagram is on page 176.



Key No.	Part No.	Description
1	1114NR	Body Shell
2	6225NR	Grommet, 5/8" (qty. 5)
3	6224NR	Grommet, 1/2" (qty. 3)
4	7095NR	Handle (Handle Clips #7094NR qty. 2)
5	6148NR	Burner Casting
6	3219NR	Flame Holder, Stainless Steel
7	3173NR	Spacer, Stainless Steel, 1" Long (qty. 4)
8	6025NR	Screw, 10-24 x 1-7/8" Stainless Steel (qty. 4)
9	3172NR	Flame Spreader, Stainless Steel
10	1116NR	Support Member Assembly
11	3176NR	Burner Support Arm
12	1118NR	High Limit Switch Assembly, 240˚F
13	1083NR	Spark Plug, 1/8" gap
*	6226NR	Grommet, 5/8", Spark Plug
15	1120NR	Inner Liner
16	1133NR	Wire Assembly, Spark Plug
*	1206NR	Wire Assembly, Limit Switch, Black
18	3178NR	Motor, Mounting Plate
19	NLA	Heat Shield, Thermostat Bulb
20	1174NR	Motor, 1/6 hp, 1725 rpm
21	6073NR	Fan Blade w/Set Screws
22	6124NR	Male Connector, 1/4" MPT x 1/4" Flare (qty. 2)
23	1119NR	Motor Cord Assembly
24	1121NR	Control Panel
25	6142NR	Street EI, 1/4" Short Taper 1/4 MPT x 1/4 FPT
26	6119NR	Filter
*	3186NR	Filter Bracket
28	6254NR	Regulator (second stage)
29	1125NR	Solenoid Gas Valve Assembly
30	3188NR	Gas Valve Bracket
31	6132NR	Tee, Brass, 1/4" MPT x 1/4" Flare x 1/4" Flare
32	1129NR	Tubing Assembly, Pressure Gauge
33	6388NR	Label, Wiring Diagram
34	6271NR	Pressure Gauge (1/4" Flare Inlet)
35	1122NR	Thermostat Assembly
36	1507NR	Thermostat Knob
37	1089NR	Amber Light Assembly
38	1123NR	Red Light Assembly
39	1036NR	Power Cord Assembly

Key No.	Part No.	Description
40	6223NR	Power Cord Grommet
41	6071NR	3/8 Loop Clamp (Thermostat Bulb) qty. 3
42	3187NR	Component Platform
43	10741NR	Ignition Control
*	0945NR	Tipover Switch Assembly
45	10741NR	Replacement Conversion Kit
46	6169NR	Flame Sensor Switch
47	6244NR	Terminal Board
48	1127NR	Resistor Assembly (1000 Ohm)
49	3191NR	Orifice #45 Drill
50	1130NR	Fuel Line Assembly
51	1131NR	Cover Assembly Control Box
52	6252NR	POL/Excess Flow Valve
53	6253NR	Pressure Regulator, 40 psi, Preset
54	6151NR	1/4" x 10' Hose
	2525	1/4" x 25' Hose
55	3180NR	Grill
56	1137NR	Manifold, Filter to Regulator
58	1128NR	Tube, Valve-Filter
59	6136NR	Elbow, 90˚, 1/4" MPT x 1/4" Inverted Flare
60	6426NR	Label, Operating Instructions
*	6382NR	Label, Thermostat Knob
62	1117NR	Heat Shield, Flame Sensor
*	1134NR	Wire Assembly, Flame Sensor, Brown
*	1135NR	Wire Assembly, Flame Sensor, Yellow
65	3037NR	Nut, Spark Plug, 14mm
66	6010NR	Set Screw, Nylock 1/4-28 (qty. 2)
67	6229NR	Spacer, Fan Retention
68	6383NR	Label, Universal Trademark
*	6410NR	Label, Thermostat Warning
70	6387NR	Label, Filter
*	6070NR	Loop Clamp, 5/16"(Flame Sensor)
72	6079NR	Standoff (qty. 3)
73		Screw, N/A
*	6065NR	Spacer, .2ID x 1/2"
*	6185NR	Terminal, "U" Adapter
*	C100	100 lb. Propane Cylinder (qty. 3)
*	P400	Propane Cylinder Manifold (qty. 2)
*	1630RU	30” Rubber Pigtail (qty. 2)

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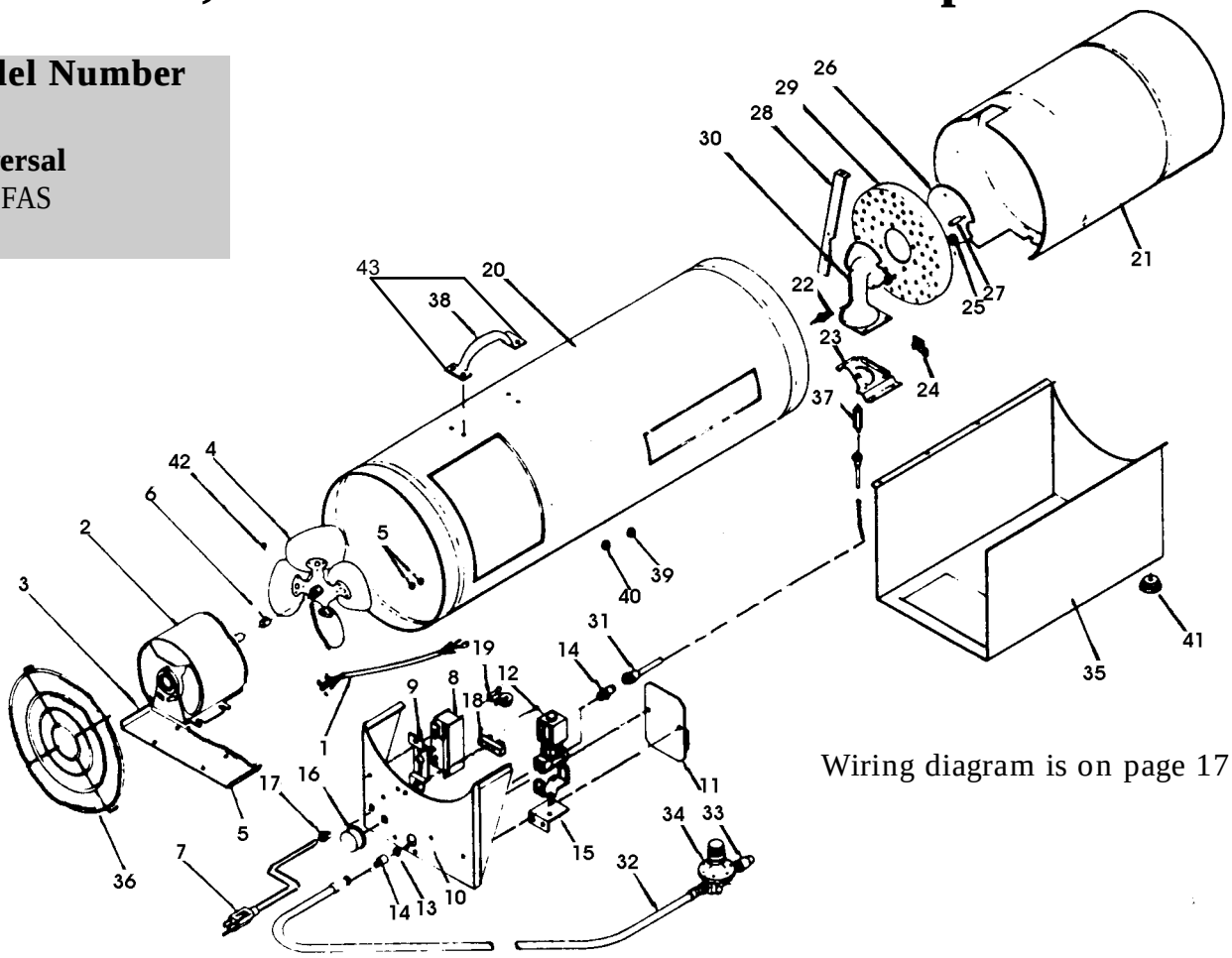
175-350,000 BTU Forced Air Scheu Propane Heater

Model Number

Universal
3500FAS



Wiring diagram is on page 175.

Key No.	Part No.	Description
1	1119NR	Motor Cord Assembly
2	1174NR	Motor Assembly
3	3178NR	Motor Support
4	6073NR	Fan 12", CCW 1/2 ID HUB
5	6225NR	Snap bushing, 5/8" Nylon (qty. 3)
6	6229NR	Spacer, Fan 1/2 x 5/8
7	1036NR	Power Cord Assembly
8	1122NR	Thermostat Assembly
9	3441NR	Bracket Thermostat Mounting
10	1451NR	Panel Control Assembly Ram
11	Call	
12	1193NR	Valve Assembly
13	6118NR	Filter 1/4 pipe insert
14	6124NR	FTG Male Conn 1/4 FLR x 1/4 MPT (qty. 2)
15	3516NR	Valve Mounting Bracket
16	1507NR	Thermostat Knob Assembly
17	6223NR	Strain Relief Bushing, 5/8"
18	6641NR	Terminal Board
19	6946NR	Tip Switch Mounting, Nylon (use 0945NR conversion assembly)
20	1114NR	Outer Shell Assembly
21	1120NR	Middle Cylinder Assembly
22	1083NR	Spark Plug, 1/8" gap
23	1116NR	Support Assembly, Venturi/Orifice
24	1176NR	High Limit Control Assembly
25	3037NR	Nut, Spark Plug, 14mm
26	3172NR	Flame Spreader
27	3173NR	Spacer, Flame Spreader 1/4 x 1 (qty. 4)
28	3216NR	Burner Support
29	3219NR	Flame Holder
30	6148NR	Venturi Casting
31	1177NR	Fuel Tube Assembly
32	6151NR	Hose Assembly LP 1/4 x 1/4 MPT x 1/4 FPT
33	6252NR	POL Excess Flow
34	6258NR	Regulator 5-20 psi 1/4"x1/4"FPT
35	1372NR	Control Box Assembly
36	3180NR	Inlet Grill Assembly
37	3191NR	Orifice LP #45 Drill
38	7095NR	Handle
39	6224NR	Snap Bushing, 1/2"
40	6226NR	Universal Bushing, 5/8" Nylon
41	6576NR	Bumper Rubber Feet (qty. 2)
42	6010NR	Set Screw, 1/4-28 Nyloc*
*	6025NR	Screw, 1-7/8" S.S.
*	6070NR	Loop Clamp, 5/16" (qty. 2)
43	7094NR	Clip Handle Mounting (qty. 2)
*	6312NR	Manual,Operating Instructions
*	6052NR	Nut, Flex Lock #10-24 Thin
*	2525	25' Hose
*	C100	100 lb. Propane Cylinder (qty. 3)
*	P400	Propane Cylinder Manifold (qty. 2)
*	1630RU	30" Rubber Pigtail (qty. 2)

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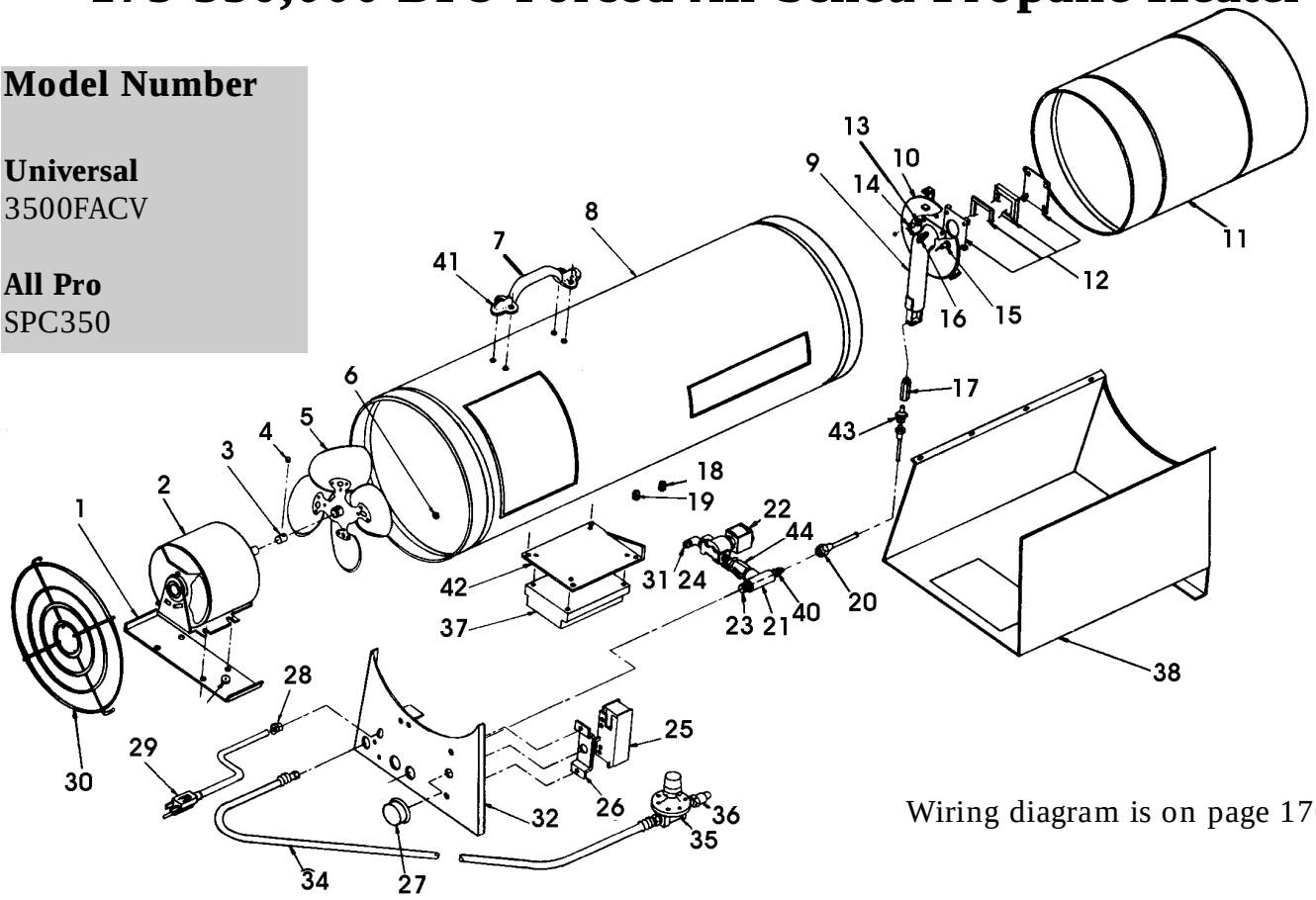
175-350,000 BTU Forced Air Scheu Propane Heater

Model Number

Universal
3500FACV

All Pro
SPC350



Wiring diagram is on page 176.

Key No.	Part No.	Description
1	3178NR	Motor Support
2	1174NR	Motor Assembly
3	6229NR	Spacer, Fan
4	6010NR	Set Screw (qty. 2)
5	6073NR	Fan 12” CCW 1/2 ID HUB
6	6225NR	Snap Bushing (qty. 3)
7	7095NR	Handle
8	1486NR	Burner Shell Assy (3500FACV)
	1466NR	Burner Shell Assy (SPC350)
9	1546NR	Burner Tube Assembly
10	1491NR	Flame Holder Assembly
11	1487NR	Middle Cylinder
12	1663NR	Grid Assembly
13	3017NR	Keeper (qty. 4)
14	7121NR	Spacer (qty. 4)
15	7118NR	Electrode (#1617-Wire Assembly)
16	6168NR	High Limit Control Assembly
17	3652NR	Fuel Nozzle
18	6224NR	Snap Bushing
19	6226NR	Universal Bushing
20	1616NR	Fuel Tube Assembly
21	7343NR	Fitting, Female Tee, 1/4”
22	1125NR	Valve Assembly
23	7355NR	Fitting, Male Plug, 1/4 MPT
24	6121NR	Male Elbow, 1/4 FLR x 1/4 MPT
25	1734NR	Thermostat Control Assembly - NLA
26	3441NR	Bracket, Thermostat Mounting
27	1507NR	Thermostat Knob Assembly
28	6223NR	Strain Relief Bushing

Key No.	Part No.	Description
29	1036NR	Power Cord Assembly
30	3180NR	Inlet Grill Assembly
31	6118NR	Filter, 1/4 Pipe Insert
32	1614NR	Panel, Control Assembly Ram
*		
34	6151NR	Hose Assembly LP
35	7406NR	Regulator 20 psi
36	6252NR	POL Excess Flow
37	Call	DSI
38	1731NR	Control Box Assembly
40	6144NR	Male Connector 5/16 FLR x 1/4 MPT
41	7094NR	Clip Handle Mounting (qty. 2)
42	Call	
43	7372NR	Male Connector 5/16 FLR x 1/8 MPT
*	6070NR	Loop Clamp, 5/16” (qty. 2)
*	7338NR	Manual, Operating Instruction
44	7431NR	Ball Valve
*	C100	100 lb. Propane Cylinder (qty. 3)
*	P400	Propane Cylinder Manifold (qty. 2)
*	1630RU	30” Rubber Pigtail (qty. 2)
*	2525	25’ Gas Hose
*	1617	Electrode Wire Assembly

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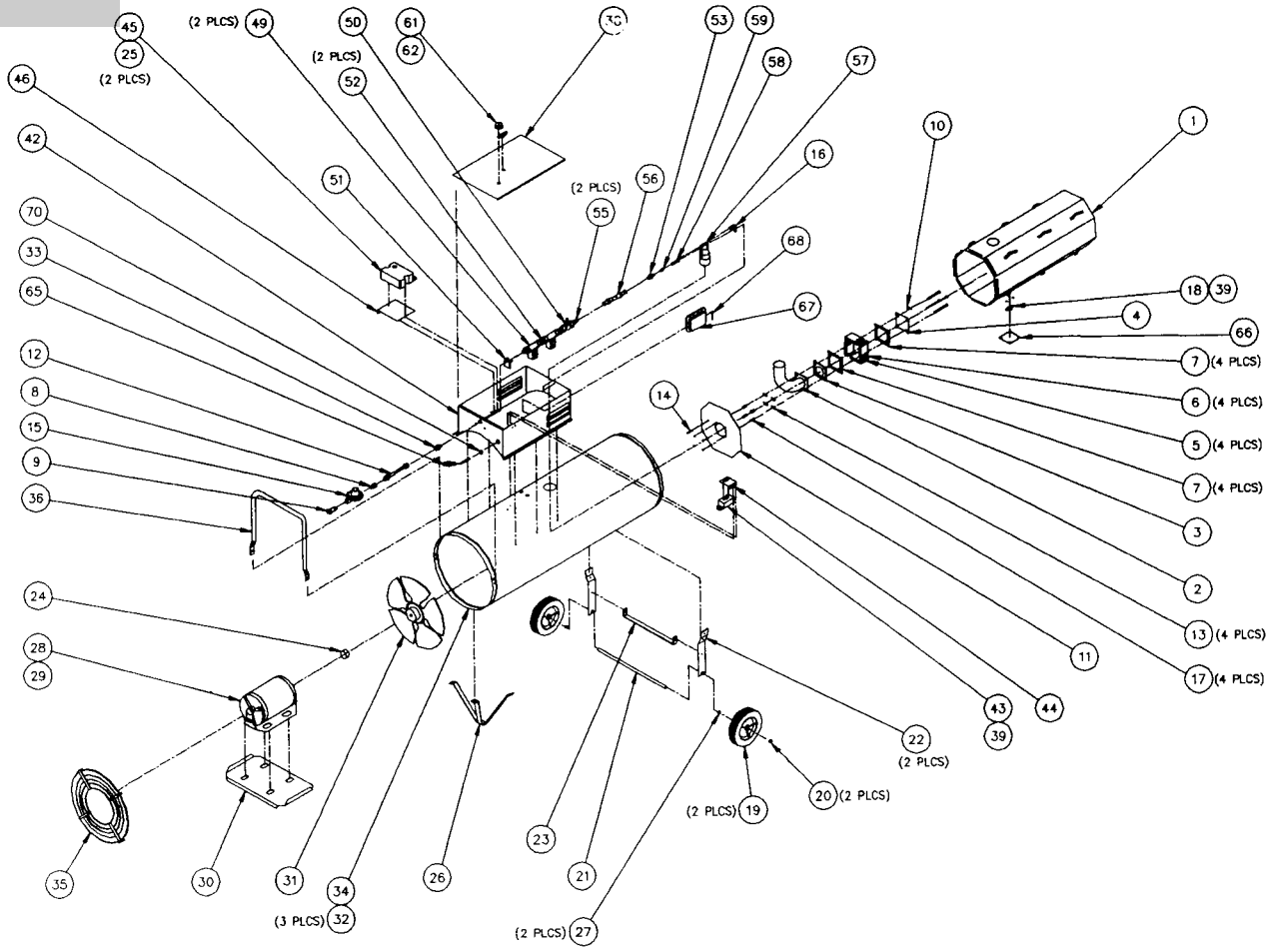
400-700,000 BTU Forced Air Scheu Propane Heater

Model Number

Universal
7000FACV



Key No.	Part No.	Description
1	1852NR	Burner Housing
2	1855NR	Burner Tube Assembly
3	1856NR	Plate, Back, Burner
4	1856NR	End Cap, Front Burner
5	1856NR	Element, Burner, Ceramic
6	1856NR	Seal, Burner Element
7	1856NR	Seal, Burner Element
8	7676NR	Fitting, Adapter
9	7660NR	P.O.L.
10	3914NR	Bracket, Spark
11	3901NR	Flame Holder
12	7659NR	Hose Assembly
13	3017NR	Keeper,IR
14	7118NR	Electrode
15	7723NR	Regulator, 20 psig
16	3927NR	Bracket, Sleeve Attachment
17	7121NR	Spacer, Tube
18	7661NR	High Limit Switch
19	6869NR	Wheel
20	6870NR	Cap, Hub
21	3439NR	Axle
22	3898NR	Bracket, Mounting, Wheel
23	3912NR	Bracket, Support, Wheel
24	3950NR	Spacer, Fan
25	6189NR	Terminal "Y"
26	3907NR	Leg, Weldment, Rear
27	6229NR	Spacer, Wheel
28	7618NR	Motor
29	3919NR	Power Cord, Motor
30	3915NR	Bracket, Mounting, Motor
31	7619NR	Fan, 4 blade
32	6226NR	Bushing, Universal, 5/8"
33	6223NR	Bushing, Strain Relief
34	1912NR	Outer C ylinder Assembly
35	3899NR	Inlet Grill Assembly
36	3904NR	Handle
*	1110NR	Wire Assembly, Ground
38	3897NR	Cover, Control Box
39	6070NR	Clamp Loop, 5/16
*	1807NR	Wire Assy, Lead
*	1921NR	Wire Assy, Lead
42	1864NR	Control Box Assembly
43	1734NR	Thermostat
44	3889NR	Brkt, Mounting, T-stat
45	7499NR	Ignition Control-See Chart 7803NR
46	3891NR	Bracket, Ignition Control
*	1923NR	Wire Assembly, White
*	1040NR	Wire Assembly, Black
49	7721NR	Valve, Solenoid
50	7663NR	Valve, Ball
51	3934NR	Bracket, Mounting Valve
52	7720NR	Fitting, Male, Nipple
53	7475NR	Fitting, Connector
*	1883NR	Wire Assembly, Black
55	6125NR	Fitting,Connector
56	1865NR	Fuel Tube Assembly
57	1849NR	Bracket Assembly Orifice
58	3913NR	Orifice, #30 drill
59	6830NR	Fitting, Adapter
60	1922NR	Wire Assembly, Lead
61	6077NR	Knob, Thermostat
62	6382NR	Label, Thermostat
*	1872NR	Wire Assembly
*	1871NR	Wire Assembly
65	1036NR	Power Cord Assembly
66	3975NR	Plate, Hi-Limit Access
67	7722NR	Switch, Air
68	3933NR	Tube, Air Switch
*	1924NR	Air Filter
*	6373NR	Label, Fan Rotation
*	6374NR	Label, Electrical Ground
*	7732NR	Label, Universal Logo
*	6410NR	Label, Warning, Thermostat
*	6915NR	Label, Inspection
*	7508NR	Label, Warning, Painted Htrs
*	7669NR	Label,BTU Rating,700K
*	7670NR	Label, Mod/Opr. Inst.
*	7671NR	Label, Wiring Diagram
*	7554NR	Label, High/Low

* Items not shown on diagram

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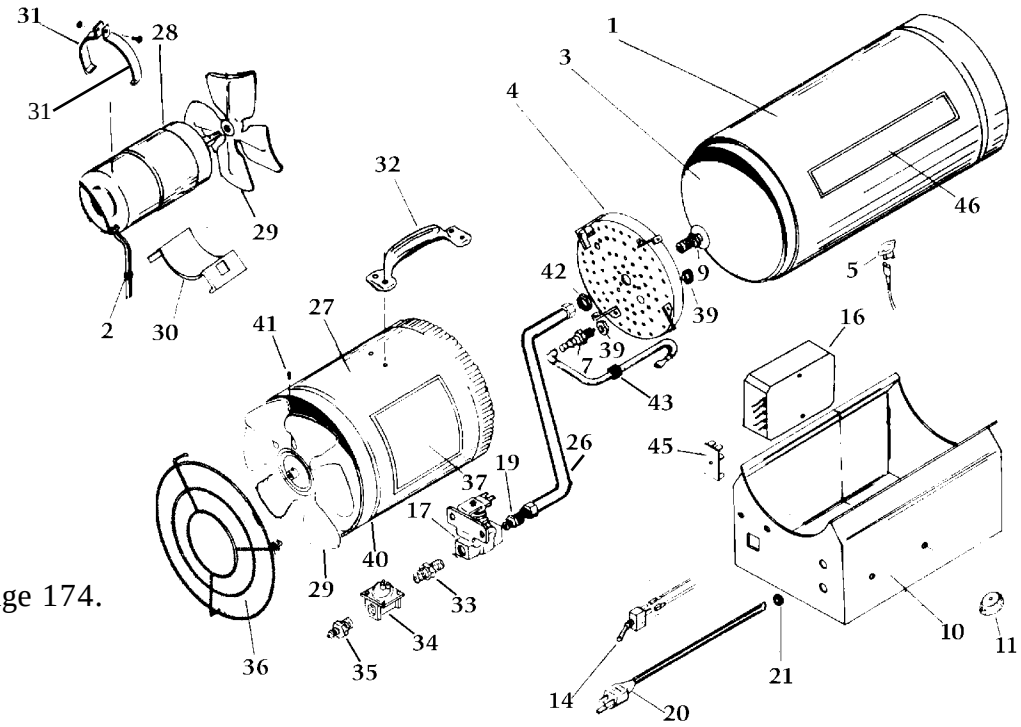
80-150,000 BTU Forced Air Natural Gas Scheu Heater

Model Number

Scheu
80/150FASNG



For wiring diagram see page 174.

Key No.	80FAS-NG Part No.	150FAS-NG Part No.	Description
1	1060NR	1078NR	Burner Shell Assy
2	6225NR	6225NR	Snap Bushing 5/8"
3	1061NR	3750NR	Middle Cylinder Asy
4	1146NR	1146NR	Flame Holder Assy
5	6168NR	6168NR	High Limit Switch,240˚F
*	6384NR	6384NR	Label, Natural Gas Only
7	1082NR	1083NR	Spark Plug
9	1227NR	1216NR	Orifice Assembly
10	1161NR	1167NR	Control Box Assembly
11		6576NR	Rubber Bumper Feet(qty. 2)
14	6170NR	6170NR	Toggle Switch
16	Call		DSI
17	6100NR	6100NR	Solenoid Valve
19	6143NR		Fitting Male Connector
		6123NR	Fitting Male Connector
20	1036NR	1036NR	Power Cord Assembly
21	6223NR	6223NR	Bushing Strain Relief (Power Cord)
*	6369NR	6369NR	Warning Label, Fuel
*	6373NR	6373NR	Label, Fan Rotation
*	6422NR	6422NR	Label, On/Off Switch
26	1162NR	1171NR	Fuel Tube Assembly
27	1064NR	1096NR	Motor Shell Assembly
28	1361NR	1166NR	Motor Assembly (5 Wire)
		1561NR	Motor Assy (3 Wire)
29	6086NR	6074NR	Fan

Key No.	80FAS-NG Part No.	150FAS-NG Part No.	Description
30	3132NR	3132NR	Lower Motor Support
31	3133NR	3133NR	Strap, Motor Support (qty. 2)
32	7095NR	7095NR	Handle
33	6146NR	6146NR	Fitting, Reducing Nple
34	6259NR	6259NR	Regulator, 4" W.C.
35	6125NR	6125NR	Fitting, Male
36	3087NR	3087NR	Grill
37	6418NR	6428NR	Label,Model/Operating
*	6374NR	6374NR	Label, Electrical Grnd
39	3037NR	3037NR	Spark Plug Nut 14mm(qty. 3)
40	6646NR	6646NR	Label, Wiring
41	6010NR	6010NR	Set Screw, Nylock
42	3038NR	3038NR	Nut, Orifice 3/4-16
43			Ignition Lead (call)
45	6444NR	6444NR	Terminal Board
46	6383NR	6383NR	Label, Universal Logo
*	6044NR	6044NR	Nut,Thin Hex, Switch
*	6328NR	6328NR	Manual, Op. Inst.
*	6189NR	6189NR	Terminal, "Y" Adptr
*	7094NR	7094NR	Clip, Handle
	5010	5010	1/2” x 10 ft Hose
	5025	5025	1/2” x 25 ft Hose
	KT121	KT121	Thermostat, warmer-cooler dial
*	10444	10444	1/2” FFIR x 1/2” FPT
*	54	54	1/2” Swivel Union

* Not shown on exploded view.

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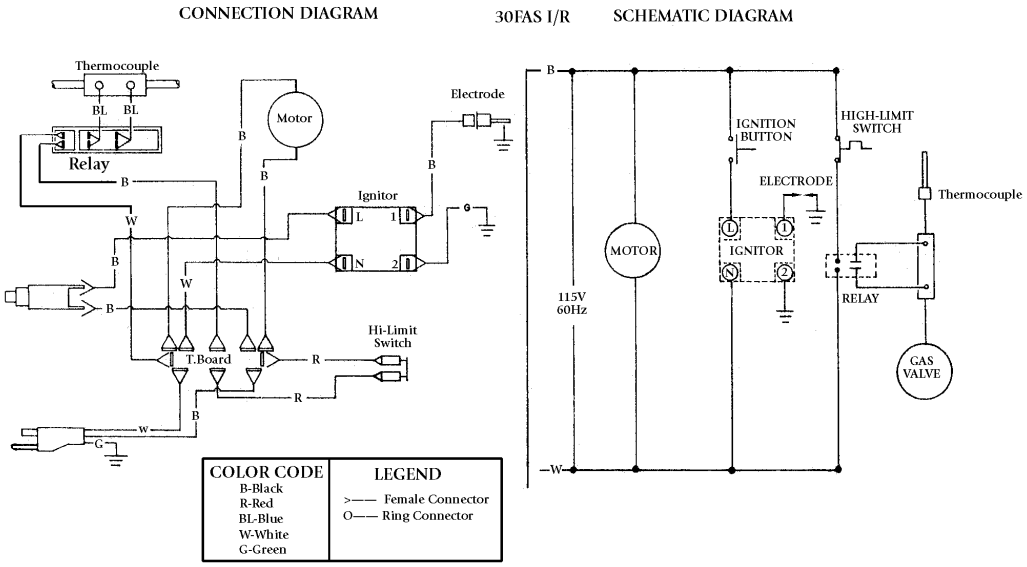
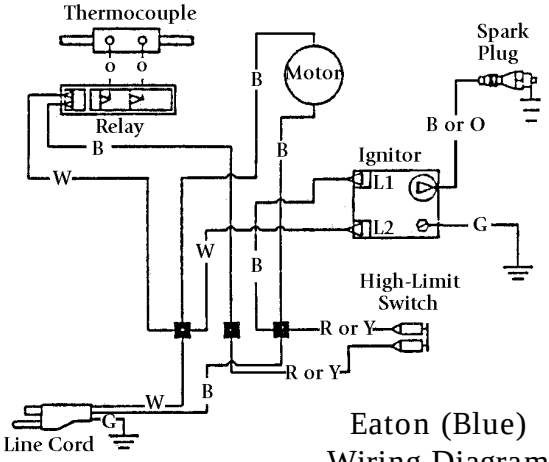
Universal Wiring Diagrams

If you do not see your exact schematic, please call 800-362-6951.

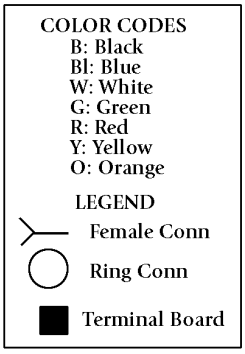
Model 30FAS/SPC30/SPC55/55F

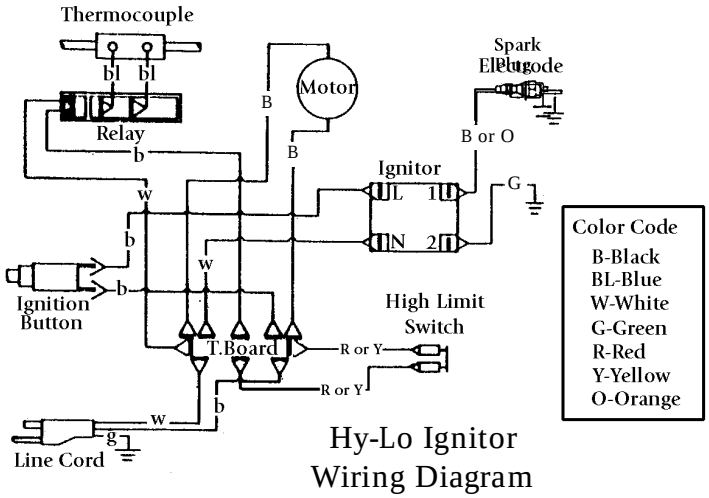


Model 40FAC/45FAC/85FAC/SPC85/125FAC/SPC125



Eaton (Blue) Wiring Diagram





Hy-Lo Ignitor Wiring Diagram

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Universal Wiring Diagrams

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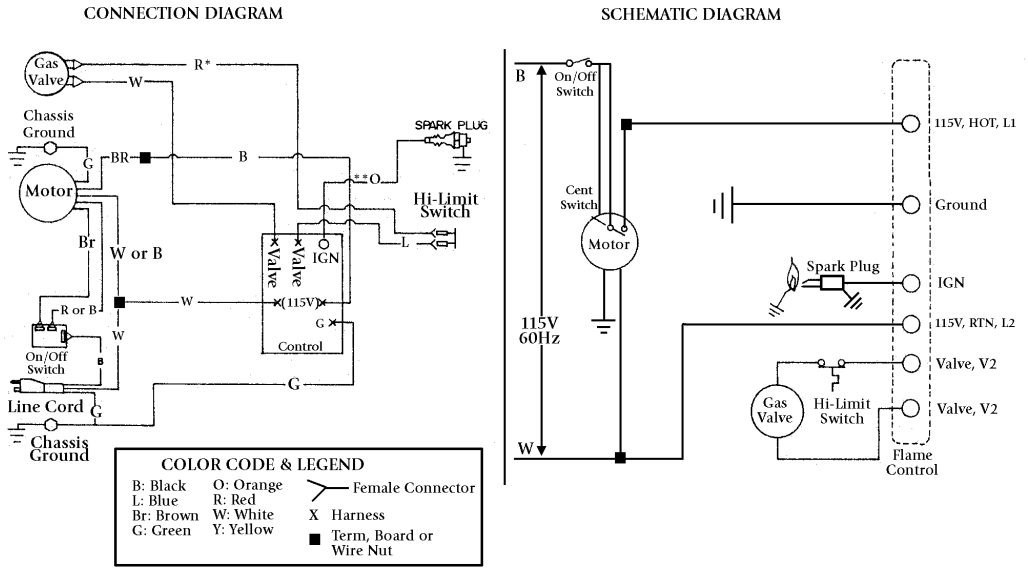
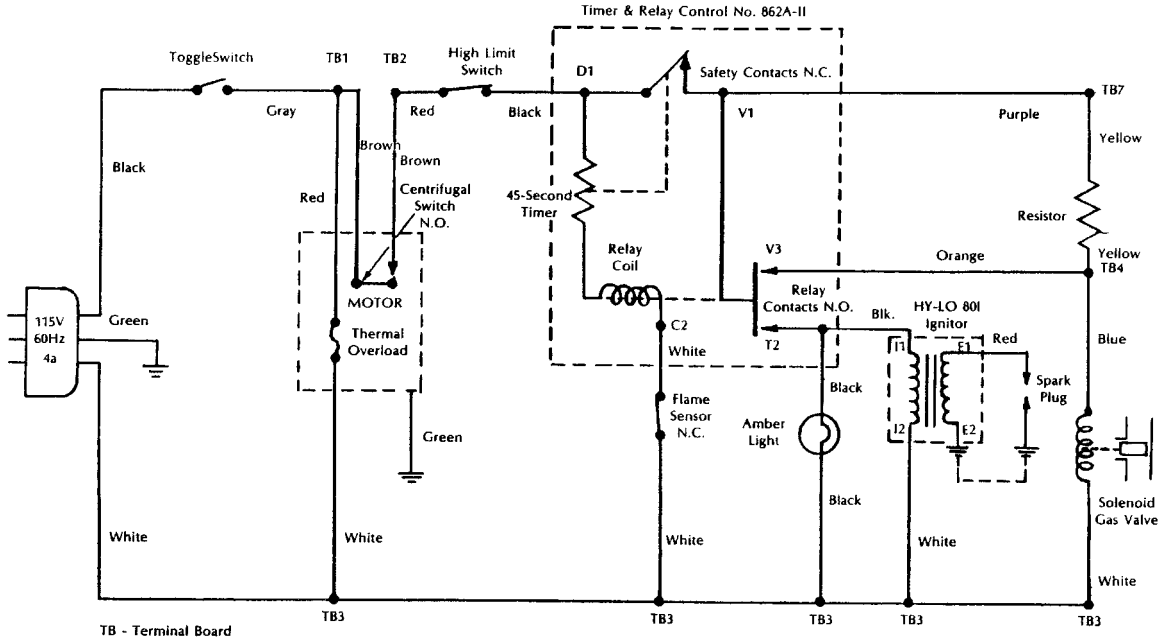
Model 80FAS



If any original wiring as supplied with the heater must be replaced, it must be replaced with type AWG 105°C wire or its equivalent except as indicated (*type SF2-2000, **SGI 250°C)

Model 150FA



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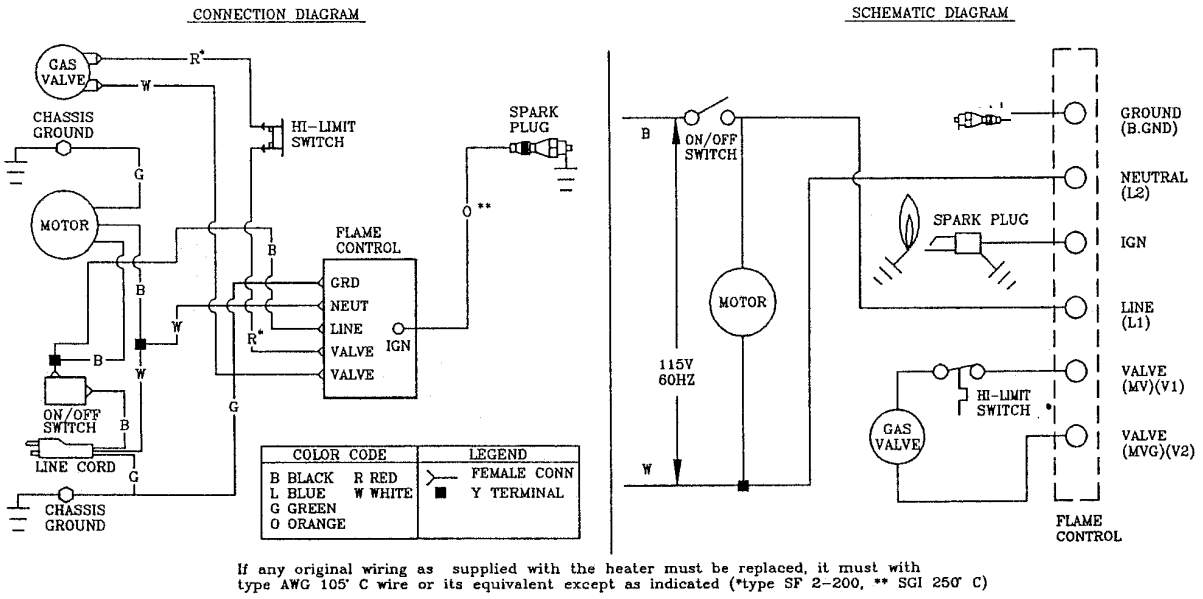
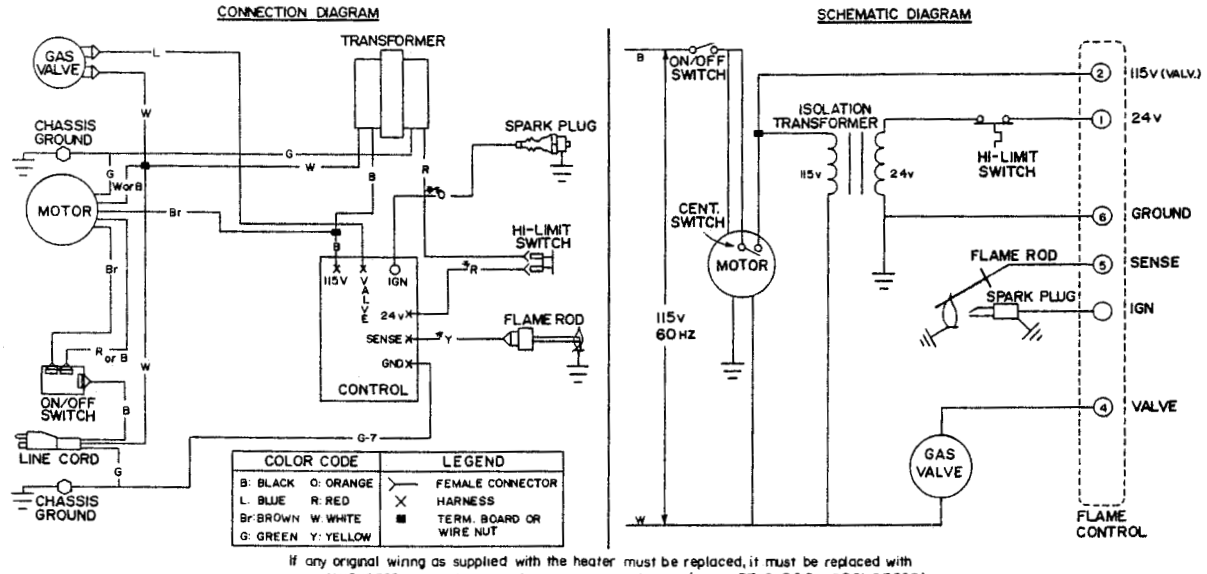
Model 150FAS (with 5 wire control)



If any original wiring as supplied with the heater must be replaced, it must with type AWG 105° C wire or its equivalent except as indicated (*type SF 2-200, ** SGI 250° C)

Model 150FAS w/Fenwall



If any original wiring as supplied with the heater must be replaced, it must be replaced with type AWG 105°C wire or its equivalent except as indicated (*type SF-2 200, **SGI 250°C)

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Universal Wiring Diagrams

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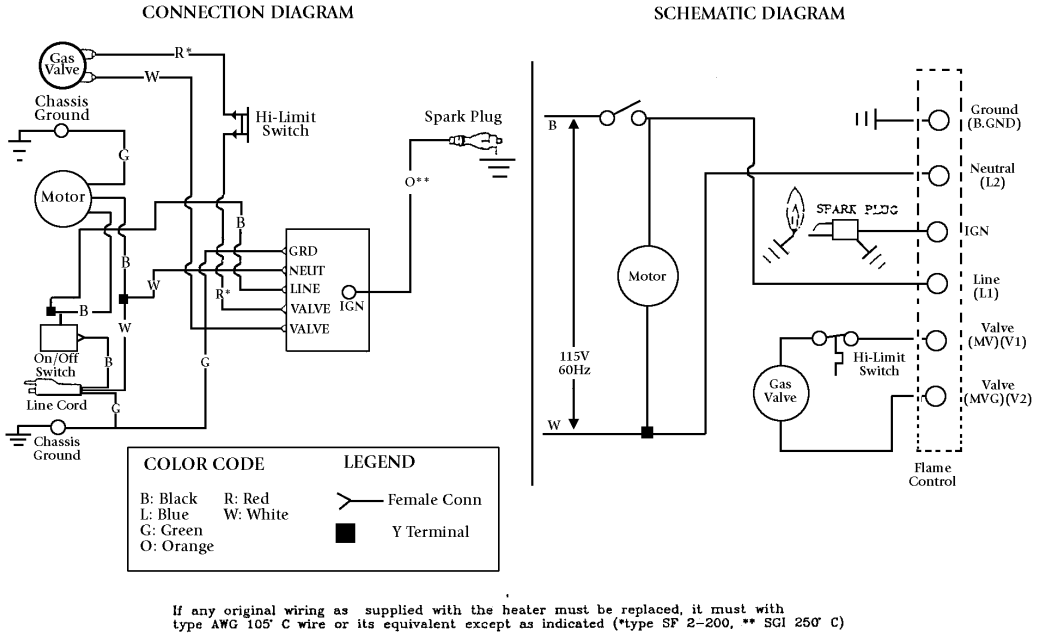
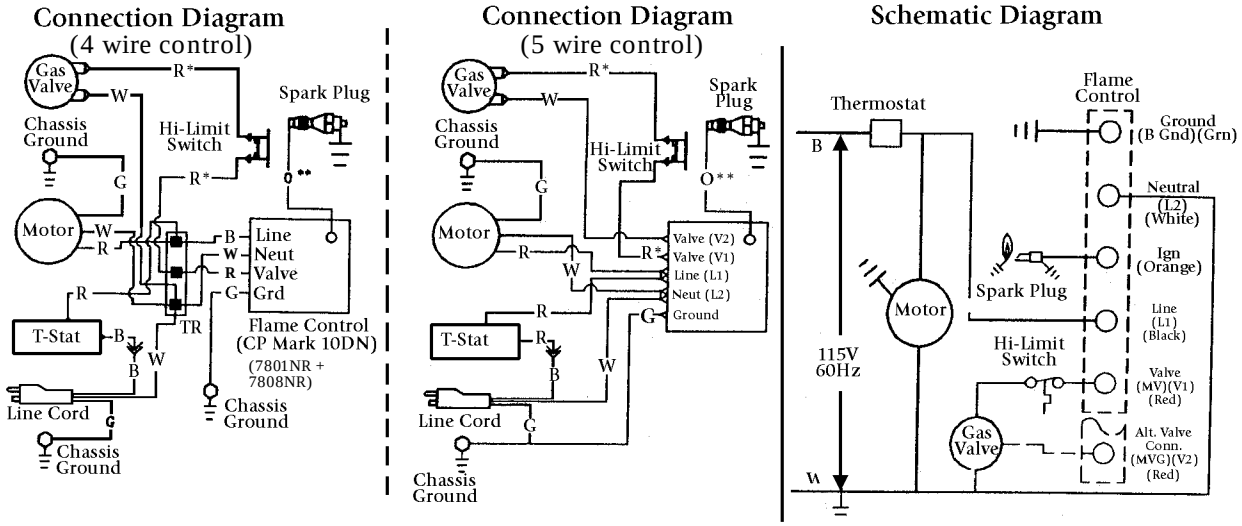
Model 150FASNG



If any original wiring as supplied with the heater must be replaced, it must with type AWG 105° C wire or its equivalent except as indicated (*type SF 2-200, ** SGI 250° C)

Model 150FAST



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Universal Wiring Diagrams

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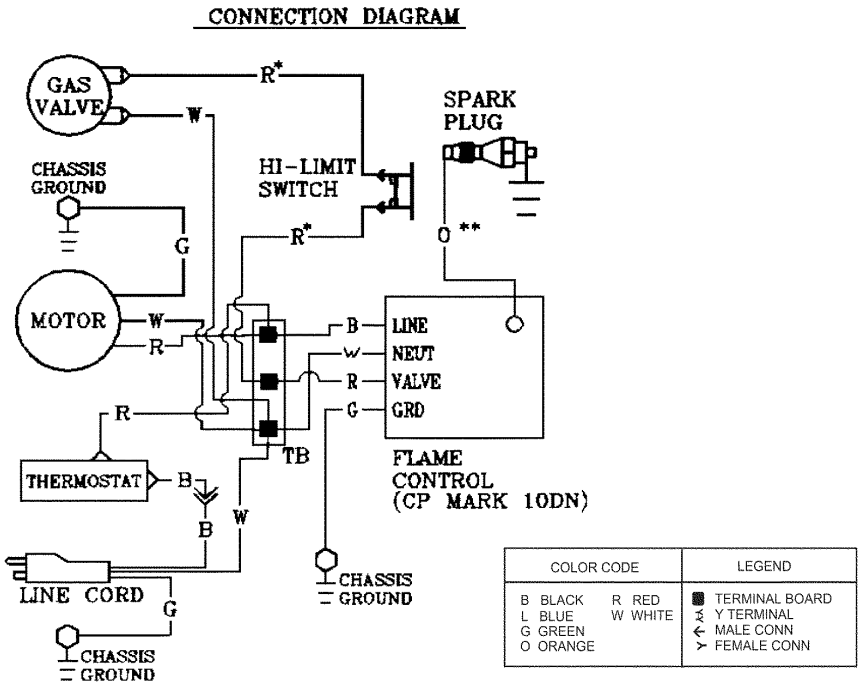
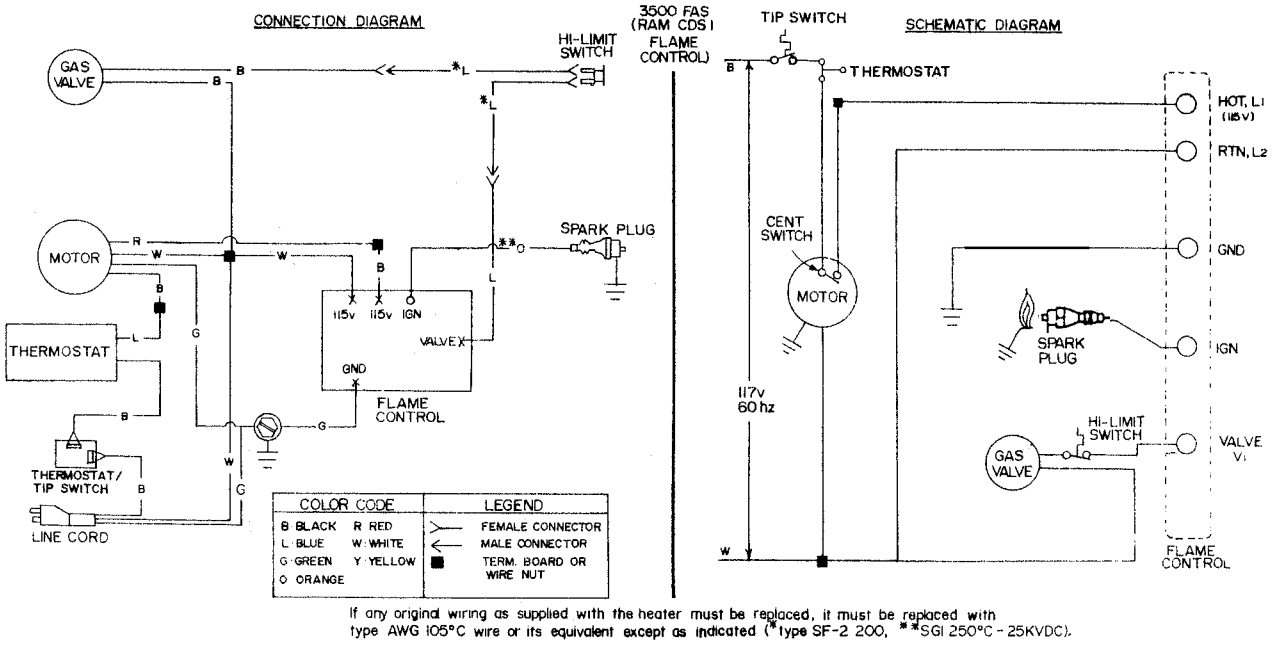
Model SPC170T/170FAST



Model 3500FAS



If any original wiring as supplied with the heater must be replaced, it must be replaced with type AWG 105°C wire or its equivalent except as indicated (*type SF-2 200, **SGI 250°C - 25KVDC).

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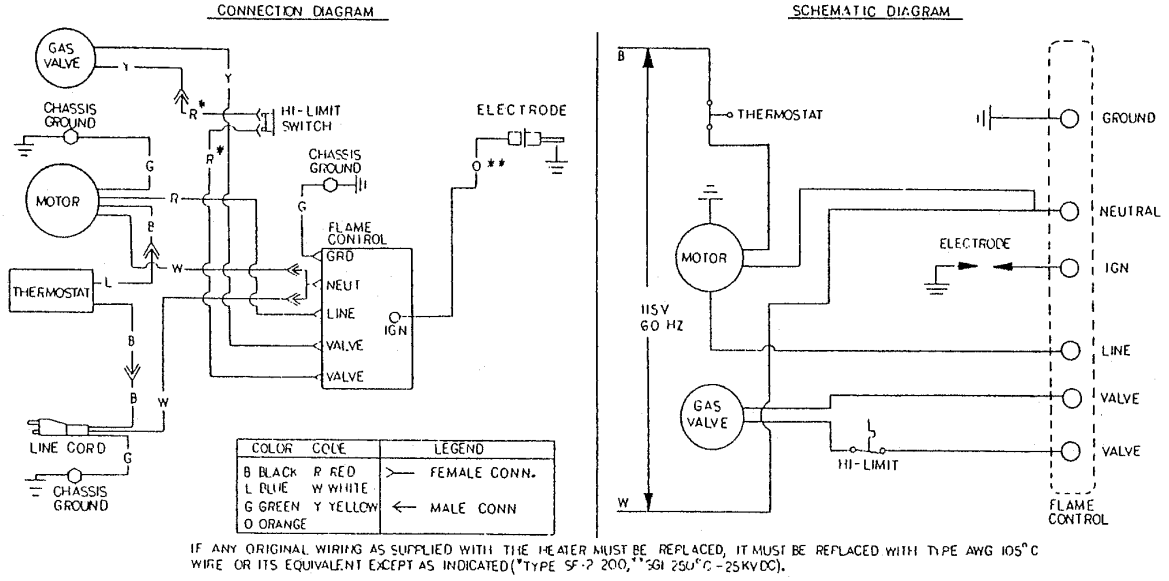
Universal Wiring Diagrams

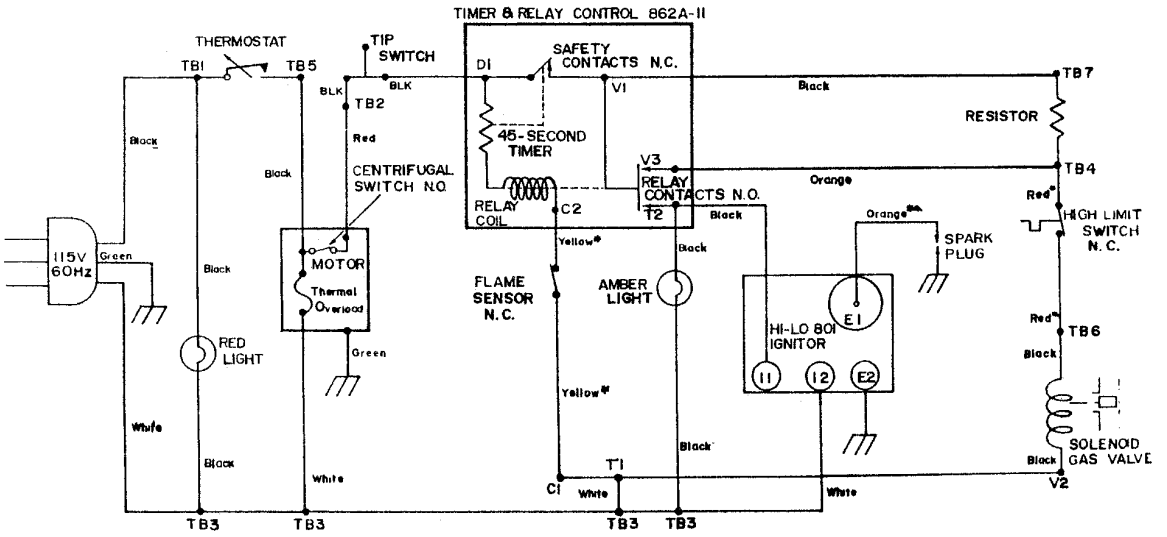
If you do not see your exact schematic, please call 800-362-6951.

Model 3500FACV
Model 3500FACNG



IF ANY ORIGINAL WIRING AS SUPPLIED WITH THE HEATER MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE AWG 105°C WIRE OR ITS EQUIVALENT EXCEPT AS INDICATED (*TYPE SF-2 200, **SGI 250°C-25KVDC).

Model 3500FA/3500FANG



If any original wiring as supplied with the heater must be replaced, it must be replaced with type AWG 105°C wire or its equivalent except as indicated (*type SF-2 200°C, **type SGI 250°C)

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Scheu Quick Parts Reference (Propane)

Model#	Motor	Thermocouple/ D.S.I.	Ignition Control/ Auto Control	Valve: Safety/	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Spark Generator	Other
30FAS/SPC30 1986	0751NR	6803NR	NA	1641NR Valve 7111NR Power Coil	6732NR	6168NR Limit	1377NR Electrode	6255NR	1640NR	7152NR (10ft)	6473NR Peizo	0966NR Relay Replacement 6171NR Push Button Cannot Use A Thermostat
30FAS/SPC30 1987	0751NR	6803NR	NA	1641NR Valve 7111NR Power Coil	6732NR	6168NR Limit	1377NR Electrode	6255NR	1640NR	7152NR (10ft)	6250NR Eaton or 3275NR HY-LO 801	0966NR Relay Replacement 6171NR Push Button Cannot Use A Thermostat
30FAS/SPC30 (1988-1992)	1368NR	6803NR	NA	1641NR Valve 7111NR Power Coil	6732NR	1440NR Limit	1377NR Electrode	6255NR	1640NR	7152NR (10ft)	6250NR Eaton or 3275NR HY-LO 801	1811 Relay 6171NR Push Button 6641NR Terminal Board
30FAS/SPC30 (1993-2002)	1368NR	6803NR	NA	7285NR Valve 7111NR Power Coil	6732NR	1440NR Limit	1377NR Electrode	6255NR	1640NR	7152NR (10ft)	6250NR Eaton or 3275NR HY-LO 801	1811NR Relay 6171NR Push Button 6641NR Terminal Board
30DFAS 1988	1429NR	NA	1446NR (Call)	6974NR	6732NR	1440NR Limit	6172NR Flame Rod	6255NR	1426NR	6151NR 2525 (25ft)	NA	Can Use A Thermostat
30DFAS (1988-1991)	1429NR	NA	1446NR (Call)	6100NR	6732NR	1440NR Limit	6172NR Flame Rod	6255NR	3618NR	6151NR 2525 (25ft)	NA	Can Use A Thermostat
30DFAS (1992-1995)	1429NR	NA	M51605-02 (Call)	6100NR	6732NR	6168NR Limit	1565NR Electrode	6255NR	3618NR	6151NR 2525 (25ft)	NA	Can Use A Thermostat
35FAC/SPC35 (1997-2002)	8076NR	8090NR	NA	8079NR 7111NR Power Coil	8077NR	6168NR Limit	8080NR Electrode	6256NR	See Valve	1591NR (10ft)	6473NR Peizo	Cannot Use A Thermostat 1007NR Hose and Regulator Assy
40FA (1978-1982)	1037NR	6542NR	NA	6105NR 7111NR Power Coil	6086NR	6168NR Limit	1083NR Spark Plug	6255NR	1259NR	6152NR (10ft) 3825 (25ft)	0761NR Hi-Lo 801 Kit	0540NR Relay 6171NR Push Button Cannot Use A Thermostat
40FAS (1981-1983)	1037NR	6654NR	NA	1641NR 7111NR Power Coil	6086NR	6168NR Limit	1082NR Spark Plug	6255NR	1032NR	7152NR (10ft)	3275NR HY-LO 801	0540NR Relay 6171NR Push Button Cannot Use A Thermostat
40FAS (1983-1988)	1037NR	6654NR	NA	1641NR 7111NR Power Coil	6086NR	6168NR Limit	1082NR Spark Plug	6255NR	1032NR	7152NR (10ft)	6250NR Eaton	1068NR Relay 6171NR Push Button Cannot Use A Thermostat
40FAS (1988-1994)	1652NR	6654NR	NA	1641NR 7111NR Power Coil	6086NR	6168NR Limit	1082NR Spark Plug	6255NR	1032NR	7152NR (10ft)	6250NR Eaton	1811NR Relay 6171NR Push Button 6641NR Terminal Board
40FAC/SPC40 (1995-2002)	1652NR	6654NR	NA	7285NR 7111NR Power Coil	6086NR	6168NR Limit	1082NR Spark Plug	6255NR	1032NR	7152NR (10ft)	3275NR HY-LO 801	1811NR Relay Cannot Use A Thermostat
45FAC/SPC45 (1997-2002)	1652NR	6654NR	NA	7285NR 7111NR Power Coil	6086NR	1751NR Limit	1082NR Spark Plug	6257NR	1930NR	6152NR (10ft) 3825 (25ft)	3275NR HY-LO 801	1811NR Relay 7431NR Ball Control Valve Cannot Use A Thermostat
55F/SPC55 2003	1652NR	6654NR	NA	7285NR 7111NR Power Coil	6086NR	1751NR Limit	1082NR Spark Plug	6257NR	2236NR	6152NR (10ft) 3825 (25ft)	3275NR HY-LO 801	1811NR Relay 7431NR Ball Control Valve Cannot Use A Thermostat
60FA-BE 1984	1315NR	6238NR	NA	6106NR	6084NR	6175NR Limit	1057NR (Manual)	6255NR	6107NR Pilot 6111NR Burner	6152NR (10ft) 3825 (25ft)	NA	Can Use Thermostat Limit Switch Is 350 Degrees
60FAS (1978-1989)	1315NR	6540NR	NA	1047NR Combo Valve	6085NR	6535NR Limit	6657NR Electrode	6255NR	6108NR Pilot 1301NR Burner Tube	6152NR (10ft) 3825 (25ft)	6473NR Peizo	Can Use Thermostat Limit Swich Is 250 Degrees
60DFAS (1985-1991)	1315NR	NA	1475NR (Call)	6100NR	6084NR	1316NR Limit	1083NR Spark Plug	6255NR	1310NR Burner Tube	6152NR (10ft) 3825 (25ft)	NA	Can Use Thermostat

Scheu Quick Parts Reference (Propane)

Model#	Motor	Thermocouple/	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Spark Generator	Other
75FAS (1990-1991)	1431NR	NA	1303NR	6100NR	6953NR	1440NR Limit 1436NR Sail	6172NR Flame Rod	6255NR	1433NR Burner Tube	6152NR (10ft) 3825 (25ft)	NA	Can Use Thermostat 6961NR Capacitor
75DFAS (1988-1991)	1431NR	NA	1303NR	6100NR	6953NR	6168NR Limit	6172NR Flame Rod	6255NR	1433NR Burner Tube	6152NR (10ft) 3825 (25ft)	NA	Can Use Thermostat 6961NR Capacitor
75DFAS (1992-1995)	1065NR	NA	M51605-02	6101NR	6953NR	6168NR Limit	1565NR Electrode	6255NR	3617NR	6152NR (10ft) 3825 (25ft)	NA	Can Use Thermostat 6961NR Capacitor
80FA (1979-1981)	0751NR	NA	10741NR Conversion	6100NR	6086NR	6168NR Limit 1165NR Flame Rod	1083NR Spark Plug	6255NR	1257NR	6152NR (10ft) 3825 (25ft)	0761NR (Call)	1245NR 115 Volt Transformer (Call) 6170NR Toggle Switch 6180NR Time Delay Relay (Call)
VX80 (1981-1982)	0751NR	NA	10741NR Conversion	6100NR	6086NR	6168NR Limit 1165NR Flame Rod	1082NR Spark Plug	6557NR	1063NR	6152NR (10ft) 3825 (25ft)	0761NR (Call)	1145NR 24Volt Transformer (Call) 6170NR Toggle Switch 1243NR Amber Light Assembly
80FAS (1981-1984)	0751NR	NA	10741NR Conversion	6100NR	6086NR	6168NR Limit 6172NR Flame Rod	1082NR Spark Plug	6255NR	1063NR	6152NR (10ft) 3825 (25ft)	0761NR (Call)	1145NR 24 Volt Transformer (Call) 6170NR Toggle Switch Can Use Thermostat
80FAS 1885	0751NR	NA	1303NR (Call)	6100NR	6086NR	3207NR Air Switch 6172NR Flame Rod	1082NR Spark Plug	6255NR	1063NR	6152NR (10ft) 3825 (25ft)	NA	6170NR Toggle Switch Can Use Thermostat
80FAS (1986-1987)	0751NR	NA	1303NR (Call)	6100NR	6086NR	6168NR Limit 3207NR Air Switch	1082NR Spark Plug	6255NR	1063NR	6152NR (10ft) 3825 (25ft)	NA	6170NR Toggle Switch Can Use Thermostat
80FAS (1988-1990)	1361NR	NA	1303NR (Call)	6100NR	6086NR	6168NR Limit	1082NR Spark Plug	6255NR	1063NR	6152NR (10ft) 3825 (25ft)	NA	6170NR Toggle Switch Can Use Thermostat
80FAS (1991-1993)	1551NR	NA	M51605-02	6100NR	6086NR	1550NR Limit	1082NR Spark Plug	6255NR	1063NR	6152NR (10ft) 3825 (25ft)	NA	6170NR Toggle Switch Can Use Thermostat
80FAC (1994-1999)	1551NR	NA	M51605-02 or 7499NR (Call)	6100NR	6086NR	1550NR Limit	1083NR Spark Plug	6255NR	1755NR	6152NR (10ft) 3825 (25ft)	NA	6170NR Toggle Switch 1671NR Motor Mounting Grill Can Use Thermostat
80FAC (2000-2002)	1551NR	NA	7808NR	6100NR	6086NR	1550NR Limit	1083NR Spark Plug	6255NR	1755NR	6152NR (10ft) 3825 (25ft)	NA	6170NR Toggle Switch 1959NR Wiring Harness Can Use Thermostat
85FAC/SPC85 1992	1551NR	6654NR	NA	7285NR 7111NR Power Coil	6086NR	1751NR Limit	1083NR Spark Plug	6257NR	1673NR	6152NR (10ft) 3825 (25ft)	6250NR Eaton	1811NR Relay 7404NR Variable Ball Valve 6171NR Push Button Switch
85FAC/SPC85 (1993-2002)	1551NR	6654NR	NA	7285NR 7111NR Power Coil	6086NR	1751NR Limit	1083NR Spark Plug	6257NR	1673NR	6152NR (10ft) 3825 (25ft)	3275NR HI-LO 801	1811NR Relay 7404NR Variable Ball Valve Cannot Use A Thermostat
125FAC/SPC125 (1997-2002)	1551NR	6654NR	NA	7285NR 7111NR Power Coil	7898NR	2003NR Limit	1083NR Spark Plug	6257NR	2002NR	6152NR (10ft) 3825 (25ft)	3275NR HI-LO 801	1811NR Relay 7897NR Variable Control Valve Cannot Use A Thermostat
150FA (1975-1983)	1166NR	NA	10742NR Conversion	6100NR	6074NR	6168NR Limit 6169NR Flame Sensor	1083NR Spark Plug	6255NR	3122NR	6152NR (10ft) 3825 (25ft)	0761NR (Call)	6170NR Toggle Switch 1090NR Resistor Assy Can Use Thermostat
150FAS (1988-1991)	1166NR	NA	10741NR Conversion	6100NR	6074NR	6168NR Limit 6172NR Flame Rod	1082NR Spark Plug	6255NR	1168NR	6152NR (10ft) 3825 (25ft)	NA	1145NR 24Volt Transformer 6170NR Toggle Switch 6269NR Ball Control Valve
150FAS/SPC150FA (1992-1996)	1561NR	NA	M51605-02 / 7499NR (Call)	6100NR	6074NR	1550NR Limit	1083NR Spark Plug	6255NR	1168NR	6152NR (10ft) 3825 (25ft)	NA	6170NR Toggle Switch Can Use Thermostat

Scheu Quick Parts Reference (Propane)

Model#	Motor D.S.I.	Thermocouple/ Auto Control	Ignition Control/	Valve: Safety/ Cage	Fan/Squirrel	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Spark Generator	Other
150FAST/SPC150T (1997-1998)	1561NR	NA	M51605-02 / 7499NR (Call)	6100NR	6074NR	1550NR Limit	1083NR Spark Plug	6255NR	1168NR	6152NR (10ft) 3825 (25ft)	NA	1734NR Thermostat 1942NR Thermostat Knob 3087NR Inlet Grill
150FAST/SPC150T (1999-2002)	1561NR	NA	7801NR / 7808NR	6100NR	6074NR	1550NR Limit	1083NR Spark Plug	6255NR	1168NR	6152NR (10ft) 3825 (25ft)	NA	1959NR Wiring Harness 1734NR Thermostat 1924NR Thermostat Knob
170FAST/SPC170T 2003	2251NR	NA	7808NR	6101NR	6074NR	6168NR Limit	8774NR	6257NR	2250NR	6152NR (10ft) 3825 (25ft)	NA	2254NR Thermostat 8777NR Burn Rate Adjustment Valve 8773NR Burn Rate Adjustment Knob
3500FA	1174NR	NA	10741NR Conversion	1125NR	6073NR	1118NR Limit 6169NR Flame Sensor 0945NR Tip Switch	1083NR Spark Plug	6254NR Interior 5-20psi 6253NR Exterior 40psi	3191NR	6151NR (10ft) 2525 (25ft)	3275NR HI-LO 801	1122NR Thermostat 6119NR J S Filter 1127NR 1000 Ohm Resistor
3500FAS	1174NR	NA	1303NR (Call)	1125NR	6073NR	1176NR Limit 0945NR Tip Switch	1083NR Spark Plug	6258NR	3191NR	6151NR (10ft) 2525 (25ft)	NA	1122NR Thermostat 6118NR Filter, Pipe Insert 1/4" 1507NR Thermostat Knob
3500FAC	1174NR	NA	Call	1125NR	6073NR	1316NR Limit	7118NR Electrode	6258NR	3652NR	6151NR (10ft) 2525 (25ft)	NA	1663NR Ceramic Burner Grid Assy 1122NR Thermostat 6118NR Filter, Pipe Insert 1/4"
3500FACV	1174NR	NA	Call	1125NR	6073NR	6168NR Limit	7118NR Electrode	7406NR	3652NR	6151NR (10ft) 2525 (25ft)	NA	1663NR Ceramic Burner Grid Assy 7431NR Ball Adjustment Valve 1734NR Thermostat
7000FACV (1996-1998)	7618NR	NA	7499NR	7721NR (qty 2)	7619NR	7661NR Limit 7722NR Air Switch	7118NR	7723NR	3913NR	7659NR (10ft)	NA	1856NR Ceramic Burner Grid Assy 6689NR Wheel (qty 2) 1734NR Thermostat
7000FACV (1999-2002)	7618NR	NA	7499NR (1999) 7801NR (2000-2002)	7970NR (qty 2)	7619NR	7661NR Limit 7722NR Air Switch	7118NR	7723NR	3913NR	7659NR (10ft)	NA	7660NR P.O.L Fitting 7663NR Ball Adjustment Valve 1734NR Thermostat

Scheu Quick Parts Reference (Propane Convection)

Model	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
SPC25VC	6233NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7916NR Electrode	7919NR	4034NR Pilot 4035NR Burner	7918NR (10ft)	7161NR Piezo Nut
SPC80C 80C (2003)	8643NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6255NR	8644NR Pilot 8641NR Burner	6152NR (10ft) 3825 (25ft)	8654NR Ball Valve 8651NR Ball Valve Nut 8655NR Ball Valve Insert
80VC (Pre 1999)	6233NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7160NR Electrode	6255NR	7157NR Pilot 3557NR Burner	6152NR (10ft) 3825 (25ft)	6655NR Ball Valve 7161NR Piezo Nut
80VCA	6233NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6255NR	7157NR Pilot 3557NR Burner	6152NR (10ft) 3825 (25ft)	6269NR Ball Valve 7161NR Piezo Nut
80VCB	8643NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6255NR	8644NR Pilot 8641NR Burner	6152NR (10ft) 3825 (25ft)	8654NR Ball Valve 8651NR Ball Valve Nut 8655NR Ball Valve Insert
101	6235NR 6515NR Knob	6103NR (Brushed Aluminum)	NA	6255NR	6108NR Pilot 6112NR Burner	6152NR (10ft) 3825 (25ft)	6433NR P.O.L. Fitting
SPC200C 200C (2003)	8643NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6256NR	8647NR Pilot 8646NR Burner	1591NR (10ft)	8654NR Ball Valve 8651NR Ball Valve Nut 6252NR P.O.L. Fitting
SPC200VC	6234NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6256NR	7708NR Pilot 3988NR Burner	6151NR (10ft) 2525 (25ft) 6252NR P.O.L. Fitting	6269NR Ball Valve 7161NR Piezo Nut

Scheu Quick Parts Reference (Propane Convection)

Model	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
SPC225VC	6233NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6256NR	7708NR Pilot 3988NR Burner	1591NR (10ft)	6252NR Ball Valve 7161NR Piezo Nut 6252NR P.O.L. Fitting
SPC225VCA	6233NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6256NR	7708NR Pilot 3988NR Burner	1591NR (10ft)	6269NR Ball Valve 7161NR Piezo Nut 6252NR P.O.L. Fitting
SPC225VCB	8643NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6256NR	8647NR Pilot 8646NR Burner	1591NR (10ft)	8654NR Ball Valve 8651NR Ball Valve Knob 8655NR Ball Valve Insert
250 (1985-1988)	6233NR 6045NR Clip	6104NR 7111NR Power Coil	NA	6256NR	3140NR Pilot 3145NR Burner	6151NR (10ft) 2525 (25ft)	6269NR Ball Valve 6252NR P.O.L. Fitting
250 (1994-On)	6233NR 6045NR Clip	6104NR 7111NR Power Coil	NA	6256NR	6716NR Pilot 3145NR Burner	1591NR (10ft)	6655NR Ball Valve 6252NR P.O.L. Fitting
250A 1986	6233NR 6045NR Clip	6104NR 7111NR Power Coil	NA	6256NR	6716NR Pilot 3145NR Burner	6151NR (10ft) 2525 (25ft)	6269NR Ball Valve 6252NR P.O.L. Fitting
250A (1994-2000)	6233NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7160NR Electrode	6256NR	6716NR Pilot 3145NR Burner	1591NR (10ft)	6655NR Ball Valve 7161NR Piezo Nut 6252NR P.O.L. Fitting
250H (1977-1994)	6234NR 6045NR Clip	6104NR 7111NR Power Coil	NA	6256NR	3140NR Pilot 3159NR Burner	6151NR (10ft) 2525 (25ft)	6655NR Ball Valve 6252NR P.O.L. Fitting
250P 1991	6233NR 6045NR Clip	6104NR Valve 7111NR Power Coil	6473NR Piezo 7160NR Electrode	6256NR	6716NR Pilot 3145NR Burner	6151NR (10ft) 2525 (25ft)	6655NR Ball Valve 7161NR Piezo Nut 6252NR P.O.L. Fitting
SPC250VC	6243NR 6045NR Clip	6104NR Valve 7111NR Power Coil	6473NR Piezo 7652NR Electrode	6256NR	6716NR Pilot 3145NR Burner	6151NR (10ft) 2525 (25ft)	6269NR Ball Valve 7161NR Piezo Nut 6252NR P.O.L. Fitting

Scheu Quick Parts Reference (Propane Radiant)

Model#	Thermocouple	T.E. Safety Valve	Switch: Safety	Ignitor/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
SPC9R	E73404 O.D.S. Pilot Assy	E73416	E73403 Tip Switch	E73234 Piezo See Thermocouple	E11410	See Thermocouple E73414 Burner	E73701 (5ft-optional) E73702 (12ft-optional)	E73439 Burner Tile E73446 Complete Burner Assy E73418 Burner Control Knob
11PHTT	8390NR	8401NR	8361NR Tilt Switch	8386NR Electrode	8360NR	8392NR		8397NR Knob 8403NR Ignition Wire F273702 12" Ext Hose
SPC12IR	6233NR 6045NR Nut	7285NR 7111NR Power Coil	NA	NA	6257NR	3008NR	1016NR	0566NR Ceramic Grid 3017NR Grid Keeper (Qty 2) 1010NR Complete Burner Assy
SPC15R	8661NR 8662NR Nut (Qty 2)	7111NR Power Coil	NA	NA	8663NR	8660NR Burner Head Assy	NA	8664NR Grill
SPC21PHTTS	8551NR 8541NR Nut	8553NR	8555NR Tilt Switch	8550NR Electrode	8552NR	8539NR	NA	8554NR Knob 8557NR Door Knob 8558NR Door Latch
SPC24IR SPC24IRP	6233NR 6045NR Nut	7285NR 7111NR Power Coil	NA	6473NR Piezo (24P Only) 7395NR Electrode (24P Only)	6257NR	3008NR (Qty 2)	1016NR	0566NR Ceramic Grid (Qty 2) 3017NR Grid Keeper (Qty 3) 1010NR Complete Burner Assy (Qty 2)
SPC30R	8661NR (Qty 2) 8662NR Nut (Qty 2)	7111NR Power Coil (Qty 2)	NA	8672NR Piezo 8666NR Electrode (Qty 2)	8663NR	8660NR Burner Head Assy (Qty 2)	8665NR (Qty 2)	8664NR Grill (Qty 2) 8673NR Piezo Nut
SPC35R	09352	00333	09357 Tip Switch	CR375 Piezo CR705 Ignitor	11695	05455	Call	CR710 Wheel (Qty 2) CR725 Handle CR720 Axle

Scheu Quick Parts Reference (Propane Radiant)

Model#	Thermocouple	T.E. Safety Valve	Switch: Safety	Ignitor/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
SPC36AP	6233NR 6045NR Nut	7285NR 7111NR Power Coil	NA	6473NR Piezo 7395NR Electrode 8129NR Flat Tip Electrode	6257NR	3008NR (Qty 3)	7309NR	0566NR Ceramic Grid (Qty 3) 3017NR Grid Keeper (Qty 2) 1010NR Complete Burner Assy (Qty 3)
SPC36IR	6233NR 6045NR Nut	7285NR 7111NR Power Coil	NA	NA	6257NR	3008NR (Qty 3)	1016NR	0566NR Ceramic Grid (Qty 3) 3017NR Grid Keeper (Qty 2) 1010NR Complete Burner Assy (Qty 3)
SPC42PH	8001NR	7999NR	NA	6473NR Piezo 2085NR Electrode	2075NR Assy	8063NR Pilot 4176NR Burner	2075NR Assy	8004NR Patio Knob G1851 Acme Withdrawal Valve
SPC44PHW	8301NR	8304NR	NA	8251NR Piezo 8302NR Electrode	2075NR Assy	8306NR Pilot 8303NR Burner	8248NR	8004NR Knob G1851 Acme Withdrawal Valve
SPC45PHS	8301NR	8304NR	NA	8251NR Piezo 8302NR Electrode	2075NR Assy	8306NR Pilot 8303NR Burner	8248NR	8004NR Knob G1851 Acme Withdrawal Valve
SPC48IR	6233NR 6045NR Nut	7285NR 7111NR Power Coil	NA	6473NR Piezo 7395NR Electrode 8129NR Flat Tip Electrode	6257NR	3008NR (QTY 4)	1016NR	0566NR Ceramic Grid (Qty 4) 3017NR Grid Keeper (Qty 3) 1010NR Complete Burner Assy (Qty 4)
SPC54PHW SPC54PHB	8576NR (O.D.S.)	8603NR	8605NR Tip Switch	6473NR Piezo Electrode Part Of 8576NR (O.D.S.)	2242NR Assy	8576NR Pilot (O.D.S.) 8611NR Burner	2242NR Assy	8692NR Wheel Assy 8579NR Knob 8617NR Reflector (Dome)
SPC55PHS SPC55PHT	8576NR (O.D.S.)	8603NR	8605NR Tip Switch	8577NR Pulse Igniter Electrode Part Of 8576NR (O.D.S.)	2243NR Assy	8576NR Pilot (O.D.S.) 8611NR Burner	2243NR Assy	8579NR Knob 8693NR Wheel Assy 8617NR Reflector (Dome)
SPC100RA (Pre 1991)	6235NR	6103NR (Brushed Aluminum) 6515NR Knob	NA	NA	6255NR	6108NR Pilot 6112NR Burner	6152NR (10ft) 3825 (25ft)	6433NR P.O.L. Fitting
SPC100RA (Post 1991)	6234NR 6045NR Clip	6104NR 7111NR Power Coil	NA	6473NR Piezo 3451NR Electrode	6255NR	7157NR Pilot 6112NR Burner	6152NR (10ft) 3825 (25ft)	6269NR Ball Control Valve 6433NR P.O.L. Fitting
SPC125R	09352	00332	NA	CR835 Piezo CR805 Igniter	11695	05363 Pilot	Call	CR810 Wheel (Qty 2) CR820 Axle
SPC250RA	6234NR 6045NR Clip	6104NR 7111NR Power Coil	NA	NA	6256NR	7481NR Pilot 7480NR Burner	1591NR (10ft)	1007NR Hose & Reg Assy 6433NR P.O.L. Fitting

Scheu Quick Parts Reference (Natural Gas Forced Air)

Model#	Motor	Thermocouple	Ignition control/ D.S.I.	Valve: Safety/ Auto Control	Fan/ Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose (Optional)	Spark Generator	Other
80FASNG (1996-1999)	1551NR	NA	7499NR	6100NR	6086NR	1550NR Limit	1083NR Spark Plug	6259NR	1227NR	5010 10ft*	NA	Can Use Thermostat 6170NR Toggle Switch 6444NR Terminal Board
80FASNG (2000-2002)	1551NR	NA	7808NR	6100NR	6086NR	1550NR Limit	1083NR Spark Plug	6259NR	1227NR	5010 10ft*	NA	Can Use Thermostat 1959NR Wiring Harness 6170NR Toggle Switch
150FANG	1166NR	NA	10742NR Conversion	6100NR	6074NR	6168NR Limit 6169NR Flame Sensor	1083NR Spark Plug	6259NR	3122NR	5010 10ft*	3275NR HI-LO 801	Can Use Thermostat 1243NR Amber Light 1251NR Resistor
150FASNG (1978-1990)	1166NR	NA	10741NR	6100NR	6074NR	6168NR Limit 6172NR Flame Rod	1083NR Spark Plug	6259NR	1216NR	5010 10ft*	3275NR HI-LO 801	Can Use Thermostat 6170NR Toggle Switch
150FASNG (1991-1998)	1561NR	NA	M51605-02 (Call)	6100NR	6074NR	1550NR Limit	1083NR Spark Plug	6259NR	1216NR	5010 10ft*	NA	Can Use Thermostat 6170NR Toggle Switch
150FASNG (1999-2002)	1561NR	NA	7808NR	6100NR	6074NR	1550NR Limit	1083NR Spark Plug	6259NR	1216NR	5010 10ft*	NA	Can Use Thermostat 6170NR Toggle Switch 1959NR Wiring Harness
3500FA	1174NR	NA	10741NR (Call)	1125NR	6073NR	1118NR Limit 6169NR Flame Switch 0945NR Tip Switch	1083NR Spark Plug	6254NR	3104NR	CALL	3275NR HI-LO 801	1122NR Thermostat 6119NR J & S Filter 6271NR 30lb Guage
3500FACNG	1174NR	NA	CALL	1125NR	6073NR	6168NR Limit	7118NR Electrode	6258NR	3841NR	CALL	NA	1122NR Thermostat 1663NR Ceramic Burner 6118NR 1/2" Pipe Filter Insert

* You may need to use part #'s 54 and 10444 to adapt hoses for use

Scheu Quick Parts Reference (Natural Gas Radiant & Convection)

Model#	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose (Optional)	Other
Scheu Natural Gas Convection							
80VCNG	6233NR 6045NR Clip	6104NR 7111NR Power Coil	6473NR Piezo 7160NR Electrode	6259NR	7253NR Pilot 3621NR Burner	5010 (10ft)*	6655NR Adjuster Valve Low Pressure
101NG	6235NR	6103NR Brushed Aluminum 6515NR Knob	NA	6259NR	6109NR Pilot 6112NR Burner	5010 (10ft)*	Manual Ignition Low Pressure
Scheu Natural Gas Radiant							
100RNG (Pre 1992)	6235NR	6103NR Brushed Aluminum 6515NR Knob	NA	6259NR	6109NR Pilot 6113NR Burner	5010 (10ft)*	Manual Ignition Low Pressure
100RANG (1992-1998)	6234NR 6045NR Nut	6103NR Brushed Aluminum 6515NR Knob	NA	6259NR	7253NR Pilot 6113NR Burner	5010 (10ft)*	Manual Ignition Low Pressure
100RANG (1999-2002)	6234NR 6045NR Nut	7616NR Brushed Aluminum 6515NR Knob	6473NR Piezo 3451NR Electrode	6259NR	7253NR Pilot 6113NR Burner	5010 (10ft)*	7161NR Piezo Nut Low Pressure
125RN	09352	00332	CR835 Piezo CR805 Igniter	11666	05374 Pilot	Call	CR810 Wheel (Qty 2) CR820 Axle CR815 Axle Brackets
250RANG	6234NR 6045NR Nut	6104NR 7111NR Power Coil	NA	7531NR	7479NR Pilot 3743NR Burner	5010 (10ft)*	6655NR Burner Valve 7496NR Burner Valve Handle

* You may need to use part#'s 54 and 10444 to adapt hoses for propper application

Pro Temp Gas Fired Heaters

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please call one of our technicians for assistance.

If you need technical assistance, feel free to call **Portable Heater Parts at 1-800-362-6951 or e-mail us at techservice@portableheaterparts.com**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Brand Names Include:
Pro Temp
Heat Hog

HEATER INDEX

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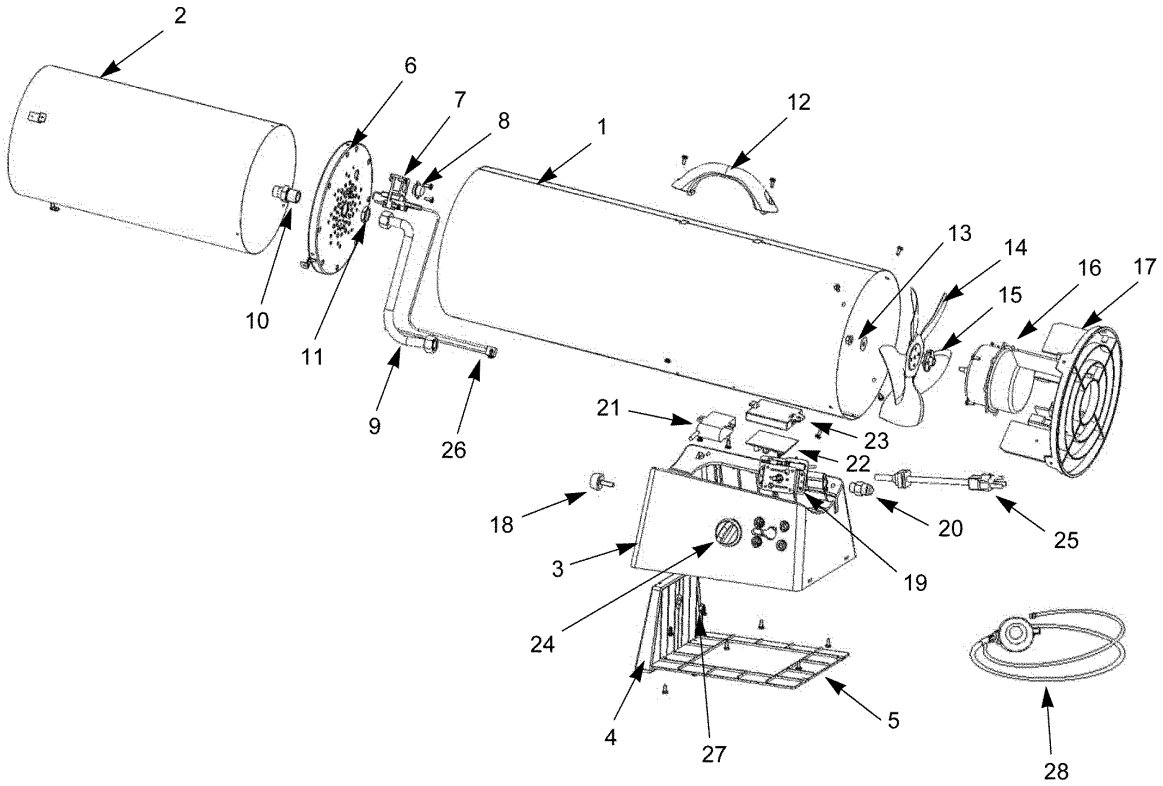
Pro Temp Propane Heaters

Model Numbers

PT40GFA PT50VGFA
PT100VGFA PT150VGFA



Key No.	Description	PT-40-GFA	PT-50V-GFA	PT-100V-GFA	PT-150V-GFA
1	Out Shell	22-524-0006	22-524-0007	22-524-0008	22-524-0008
2	Inner shell Ass'y	22-524-0004	22-524-0004	22-524-0005	22-524-0005
3	Base	22-501-0001	22-501-0001	22-501-0002	22-501-0002
4	Height Controller	22-512-0001	22-512-0001	22-512-0002	22-512-0002
5	Base Cover	22-508-0001	22-508-0001	22-508-0002	22-508-0002
6	Inner Shell Cap	22-505-0001	22-505-0001	22-505-0002	22-505-0002
7	MULTI BKT Ass'y	22-504-0002	22-504-0002	22-504-0003	22-504-0003
8	Thermal Switch	22-603-0001	22-603-0002	22-603-0001	22-603-0001
9	Tubing Ass'y	22-605-0001	22-605-0001	22-605-0002	22-605-0003
10	Nozzle	22-081-0001	22-081-0002	22-081-0003	22-081-0004
11	Nozzle Nut	22-518-0001	22-518-0001	22-518-0001	22-518-0002
12	Handle	22-511-0001	22-511-0001	22-511-0001	22-511-0001
13	Flange Hexa Nut	22-518-0003	22-518-0003	22-518-0003	22-518-0003
14	Fan	22-514-0001	22-514-0001	22-514-0002	22-514-0002
15	Cushion Pad	22-509-0001	22-509-0001	22-509-0001	22-509-0001
16	Motor Ass'y	22-061-0001	22-061-0001	22-061-0002	22-061-0002
17	Guard	22-101-0003	22-101-0003	22-101-0004	22-101-0004
18	Round Bolt	22-503-0002	22-503-0002	22-503-0002	22-503-0002
19	Valve Ass'y	22-011-0001	22-011-0002	22-011-0003	22-011-0004
20	Inlet Connector	22-507-0001	22-507-0001	22-507-0001	22-507-0001
21	Spark Moudle		22-604-0001	22-604-0001	22-604-0001
22	PCB	22-521-0001	22-521-0002	22-521-0002	22-521-0002
23	PCB Case	22-506-0001	22-506-0001	22-506-0001	22-506-0001
24	Valve Knob	22-516-0001	22-516-0001	22-516-0001	22-516-0001
25	Power Cord Ass'y	22-131-0001	22-131-0001	22-131-0001	22-131-0001
26	Thermal Switch Cable	22-601-0001	22-601-0001	22-601-0001	22-601-0001
27	Hexa Nut	22-518-0004	22-518-0004	22-518-0004	22-518-0004
28	Regulator Ass'y	22-041-0001	22-041-0001	22-041-0002	22-041-0002

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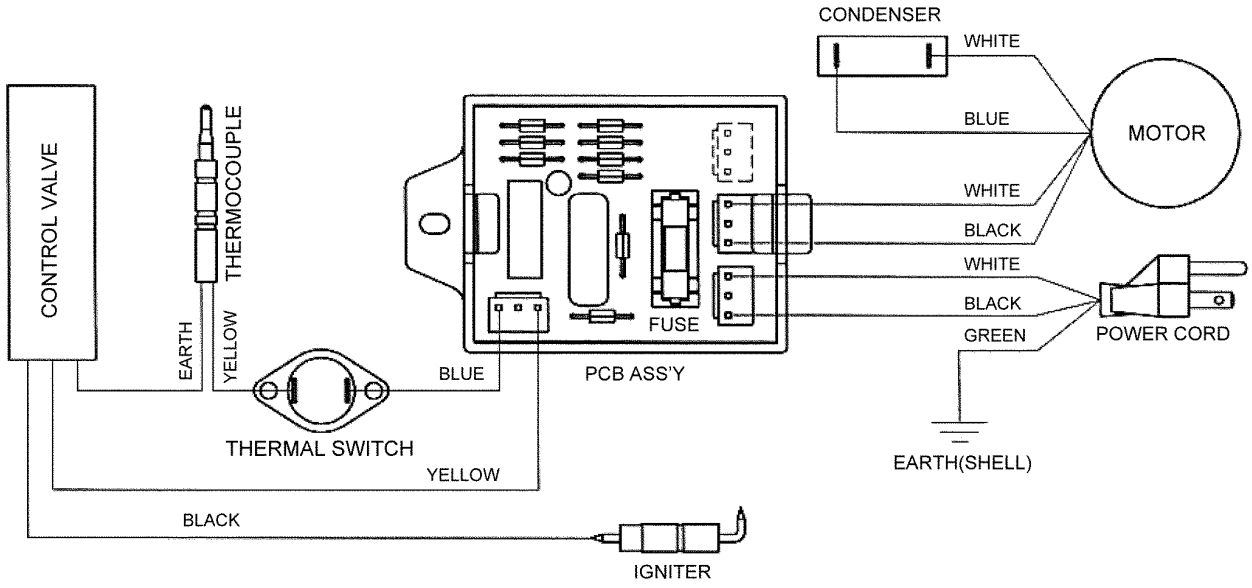
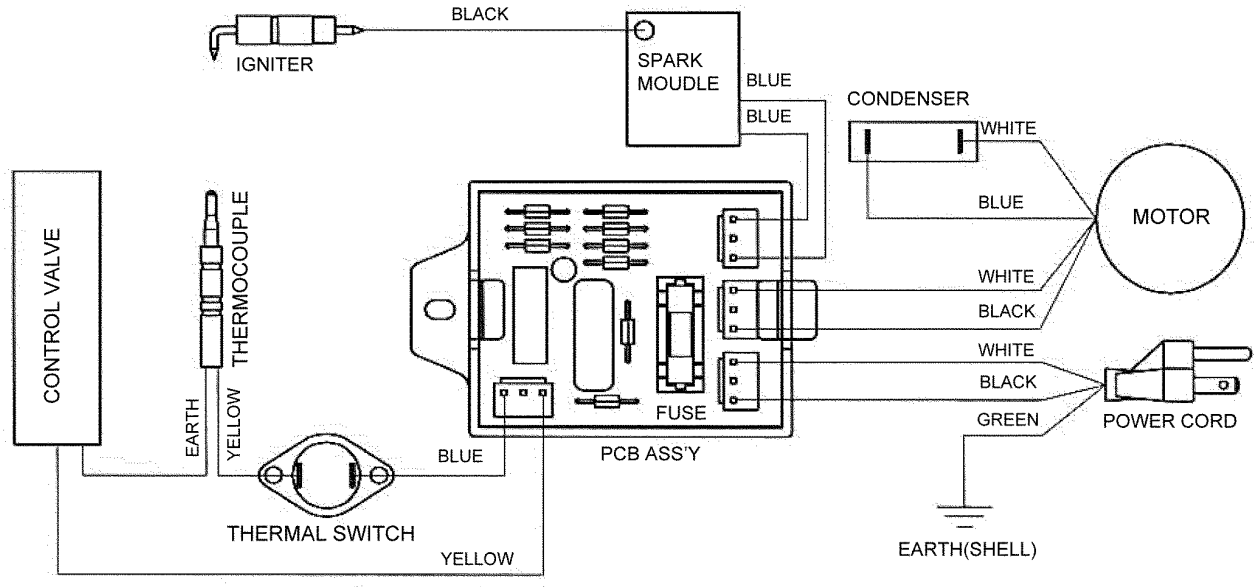
Pro Temp Propane Heaters



Wiring Diagram for Piezo/Manual Spark Models.



Wiring Diagram for Continuous Spark Models.

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HeatStar Gas Fired Heaters

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Brand Names Include:
Enerco
Mr. Heater
HeatStar

HEATER INDEX

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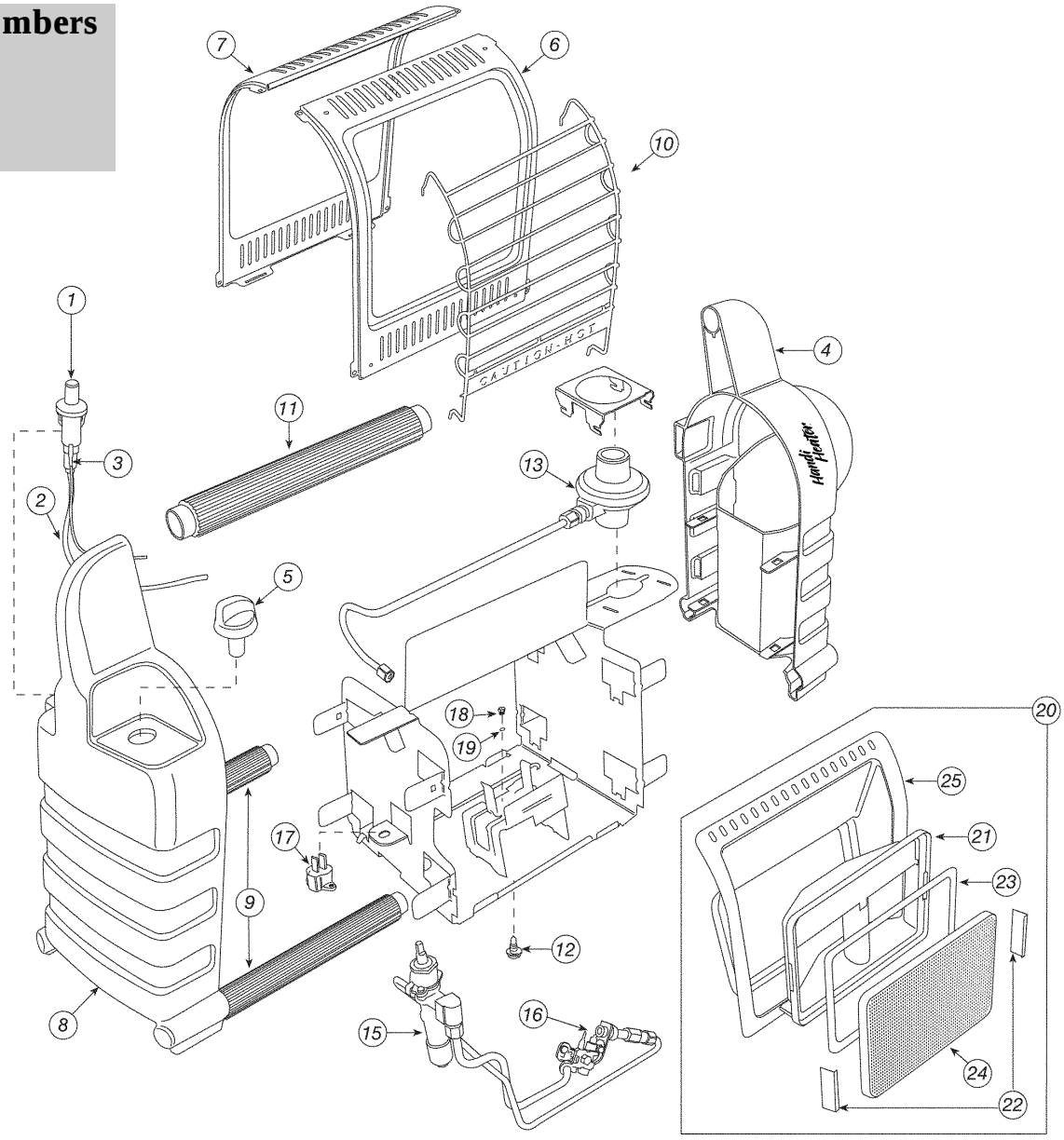
4,000 & 9,000 Scheu Propane Handi-Heater

Model Numbers
SPC9
MH9B



Key No.	Part No.	Description
1	E73234	PIEZOIGNITER
2	E73236	WIRE,IGNITER
3	E73237	WIRE,GROUND
4	E73405	COVER,RHPLASTIC
5	E73418	KNOB,FUEL CONTROL
6	E73423	COVER,FRONT
7	E73424	COVER,REAR
8	E73426	COVER,LHPLASTIC
9	E73428	BASESUPPORT TUBES (qty. 2)
10	E73449P	GUARD, WIRE
11	E73452	HANDLETUBE
12	E98959	SCREW, BURNER MT.
13	E11410	REGULATOR
14	E73432	OWNER'S MANUAL (Required when ordering parts.)
15	E73416	CONTROL VALVE
16	E73404	PILOT ASSEMBLY
17	E73403	TIP SWITCH
18	E73413	ORIFICE,BURNER
19	E71113	O-RING,BURNERORIFICE
20	E73446	COMPLETEBURNER ASSEMBLY (Includes assembled items 21- 25)
21	E73458	PLENUM,BURNER
22	E73429	CLIP, BUNER TILE (qty. 2)
23	E73433	GASKET,BURNER TILE
24	E73439	BURNERTILE
25	E73460	REFLECTOR,BURNER
*	E73702	12' Accessory Gas Hose

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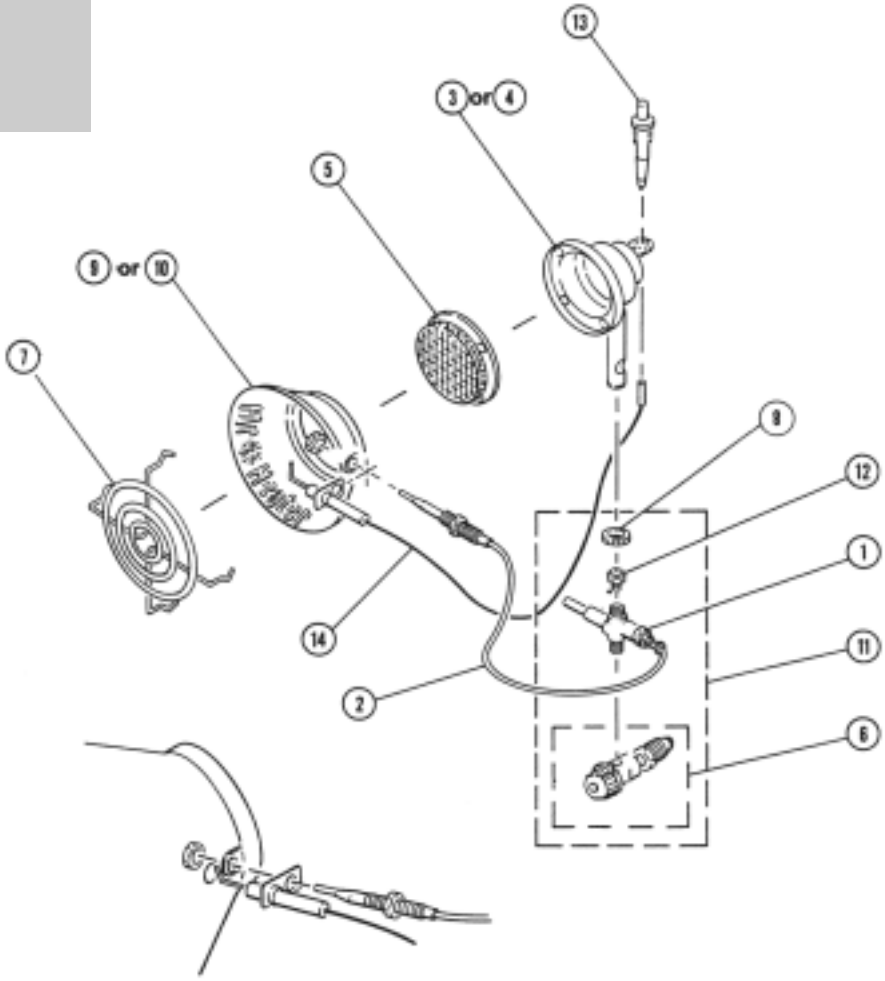
12,000 BTU Infrared HeatStar Propane Heater

Model Numbers
MH12T
MH12TS



Key No.	Part No.	Description
1	F273116	Replacement Safety Shutoff with Orifice Assembly
2	F273117	Thermocouple Lead – 12” Long
3	73122	Plenum Assembly (MH12T only)
4	73107	Plenum Assembly (MH12TS only)
5	F273164	Grid Screen Assembly
6	F273606	Replacement Regulator with Soft Nose POL
7	75102	Wire Faceguard
8	75113	Knurled Lock Nut
9	75128	Reflector (MH12T only)
10	75128S	Reflector (MH12TS only)
11	73120	Repl. Reg. H-M-L w/S.S. Tank Union T/C and Orifice
12	75784	Orifice - .018
13	73235	Sparklite Assembly (MH12TS only)
14	73233	Electrode Assembly (MH12TS only)

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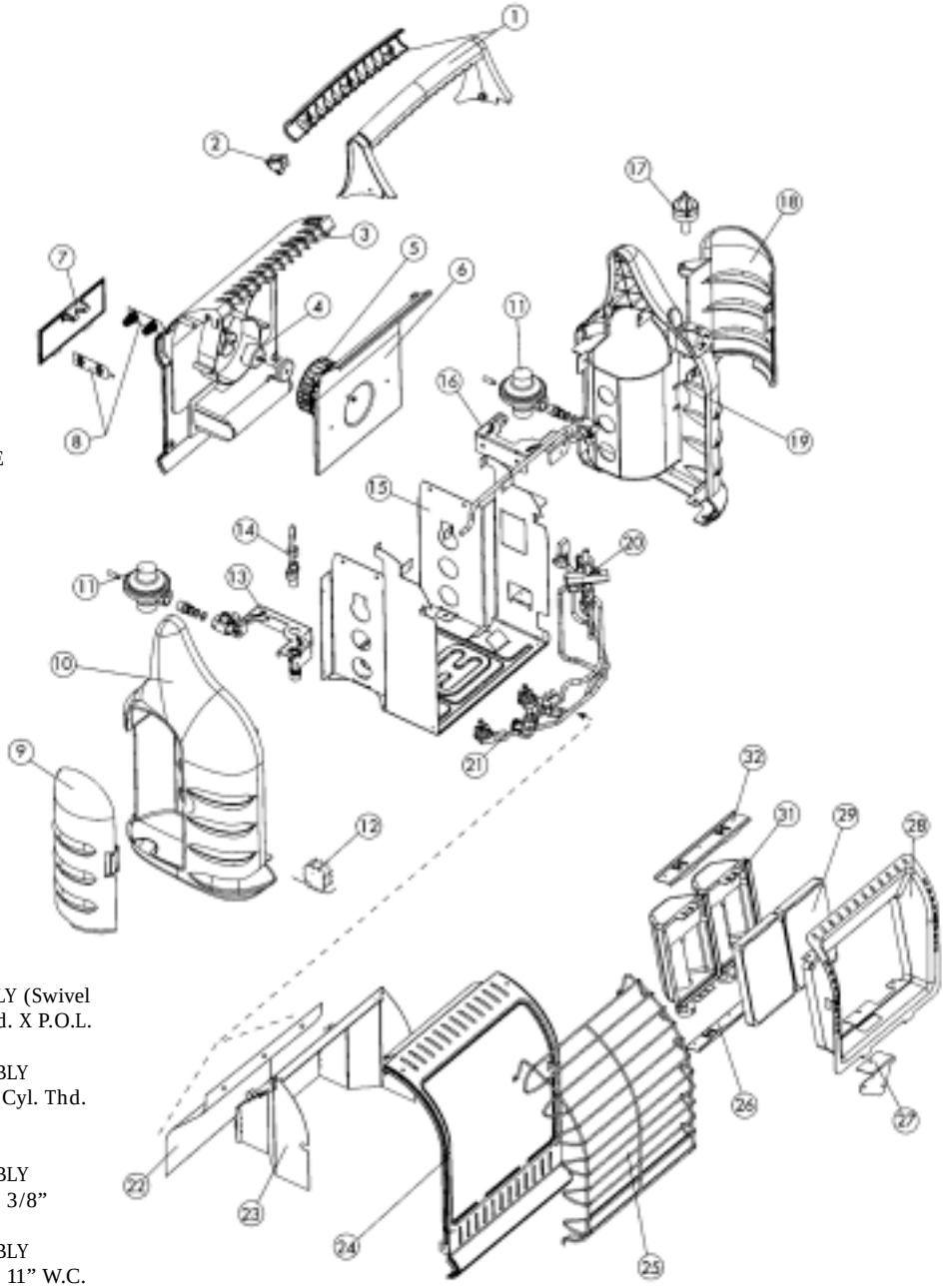
24,000 BTU HeatStar Propane Heater
"Big Buddy"

Model Numbers
MH18B

Key No.	Part No.	Description
1	78402	HANDLE, ASSEMBLY
2	78403	FAN, SWITCH
3	78404	BACK, FAN, COVER
4	78405	FAN, MOTOR
5	78406	FAN, BLOWER, WHEEL
6	78407	FAN, INTAKE, COVER
7	78408	DOOR, BATTERY, COVER
8	78409	BATTERY, TERMINALS
9	78410	DOOR LEFT SIDE COVER
10	78411	LEFT, SIDE, COVER
11	78412	(2) REGULATORS, MH18B
12	78413	TIE, WRAPS
13	78414	BRACKET, LEFT, SIDE, REG,
14	78415	LEFT, SIDE, GAS, SUPPLY, LINE
15	78416	FRAME, ASSEMBLY
16	78417	BRACKET, RIGHT, SIDE, REG,
17	78418	KNOB, CONTROL
18	78419	DOOR, RIGHT, SIDE, COVER
19	78420	RIGHT, SIDE, COVER
20	78421	VALVE, CONTROL, ASSEMBLY
21	78422	PILOT, ASSEMBLY
22	78423	SHIELD, HEAT, BACK
23	78424	SHIELD, HEAT, FRONT
24	78425	COVER, FRONT
25	78426	GUARD, WIRE, FACE
26	78427	BRACKET, BOTTOM
27	78428	PILOT, BRACKET
28	78429	REFLECTOR
29	73439	TILE
30	73433	TILE, GASKET (NOT SHOWN)
31	78431	PLENUM, BODY
32	78432	BRACKET, TOP



Accessories

F273701	5 ft. PROPANE HOSE ASSEMBLY (Swivel 1"-20 Male Throwaway Cyl. Thd. X P.O.L. w/Handwheel)
F273702	12 ft. PROPANE HOSE ASSEMBLY (Swivel 1"-20 Male Throwaway Cyl. Thd. X P.O.L. w/Handwheel)
F273699	Fuel Filter (Replace Annually)
F271802	12 ft. PROPANE HOSE ASSEMBLY w/quick disconnect fittings and 3/8" female flare fitting
F271803	12 ft. PROPANE HOSE ASSEMBLY w/quick disconnect fittings and 11" W.C. regulator w/Acme nut.

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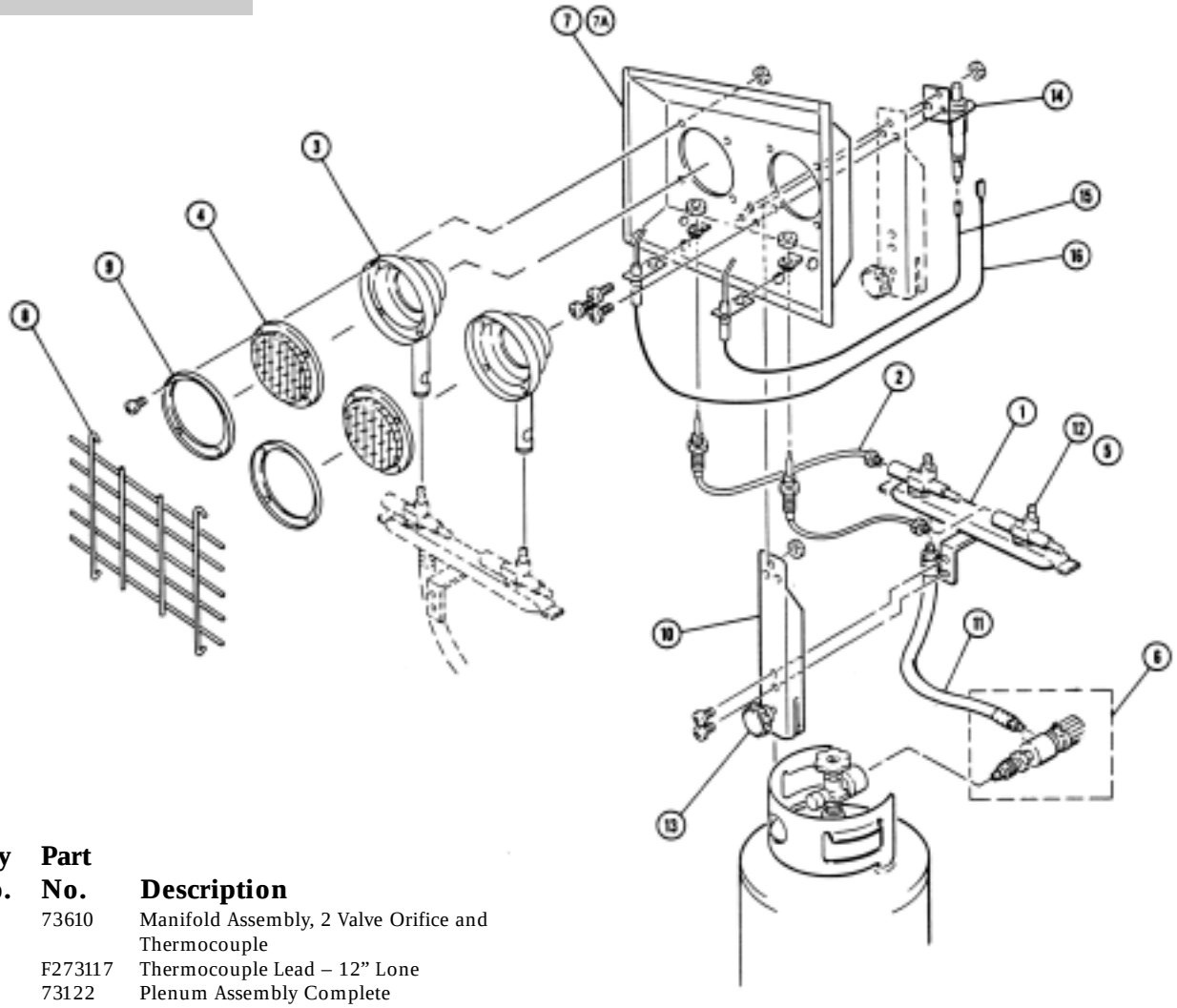
24,000 BTU HeatStar Infrared Propane Heater

Model Numbers
MH24TS



Key No.	Part No.	Description
1	73610	Manifold Assembly, 2 Valve Orifice and Thermocouple
2	F273117	Thermocouple Lead – 12” Lone
3	73122	Plenum Assembly Complete
4	F273164	Grid Screen Assembly
5	73214	Bolt – 1/-20 with Seal Washer
6	F273606	Replacement Regulator with Soft Nose POL
7	75603	Reflector (MH24T Only)
7A	75603S	Reflector (MH24TS) only)
8	75602	Wire Face Guard
9	75607	Metal Ring
10	75628	Collar Mounting Bracket
11	73658	Hose Assembly (11” Long)
12	73213	Replacement Safety Shutoff with Orifice
13	75613	Locking Knob
14	73234	Igniter/Sparklite
15	73233	Spark Electrode/Bottom
16	73231	Spark Electrode/Side

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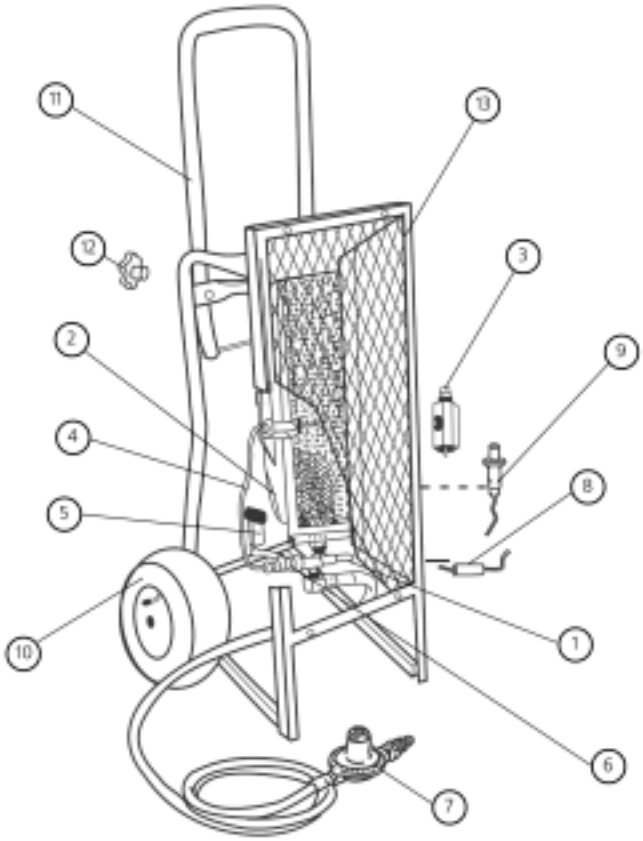
35,000 BTU HeatStar Infrared Propane Heater

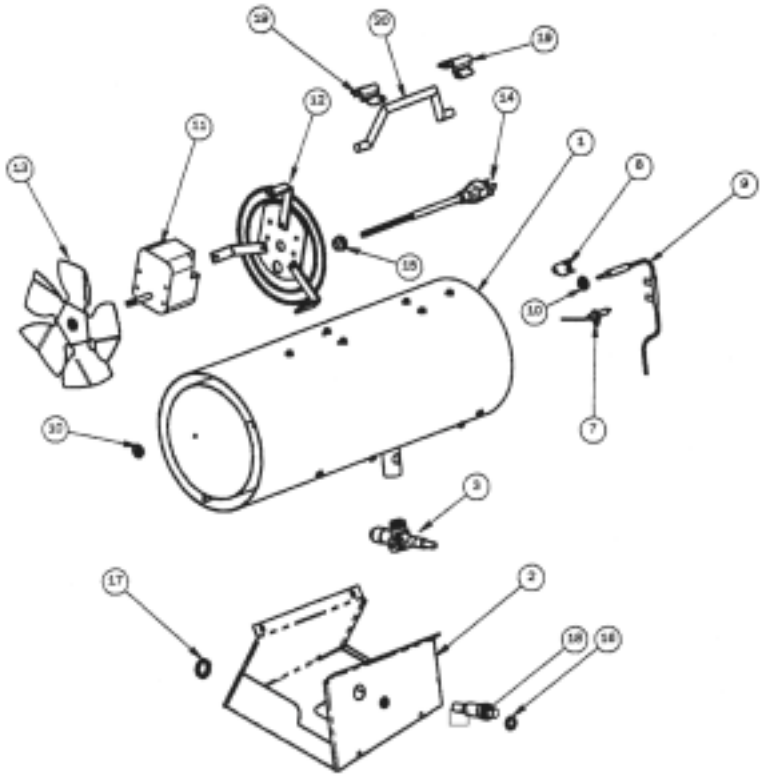
Model Numbers
MH35LPTS



Key No.	Part No.	Description
1	00333	CONT M-N SS PORT 3/8MPXI/4MP
2	02455	BURNR/LTFR PORTABLES/D1096
3	05455	ORIFICE/BURNER #55 DRILL
4	09352	THERMOCOUPLE ASSY/18”
5	09357	TIP-OVER SWITCH 6” LEAD(PORT)
6	09371	JUNCTION BLK ADPTR KIT/TIPSW
7	11663	REG L/P 27.5” W.C. OUT
8	CR705	IGNITOR, MODEL#35
9	CR735	PIEZO, MODEL#35
10	70724	WHEEL, MODEL#35
11	70720	HANDLE
12	70721	HANDLE LOCKING KNOBS (2)
13	70723	LOWER MAIN FRAME ASSEMBLY

35,000 BTU HeatStar Forced Air Propane Heater

Model Numbers
MH35FA



Key No.	Part No.	Description
1	10720	Heater Body Kit
2	2100	Control Box Assy
3	8079	Valve w/Thermocouple
*	1007	Hose & Regulator Assembly
*	2130	Wire Assembly
7	8080	Electrode
8	6168	High Limit Switch 240oF (116oC)
10	8091	Nut Hex M8 x 1 Fine Thd Thermocouple (qty. 2)
11	8076	Motor 0.74 A
12	2101	Grille Assembly
13	8077	Fan Blade, 6.75 x .75 Pitch
14	2113	Power Cord Assembly
15	8136	Bushing Strain Relief
16	8116	Nut Hex 5-28 TE Valve (qty. 2)
17	7161	Nut, Piezo
18	6473	Piezo Ignitor
19	7094	Clip Handle (qty. 2)
20	7095	Handle
*	M8494	Label, Model Warnings
*	70036	Label, Operating Instructions
*	8649	Manual, Operating Instructions/Parts List
*	M8497	Label, Model
*	8204	Label, Hang Tag, LP

* Not shown on exploded view

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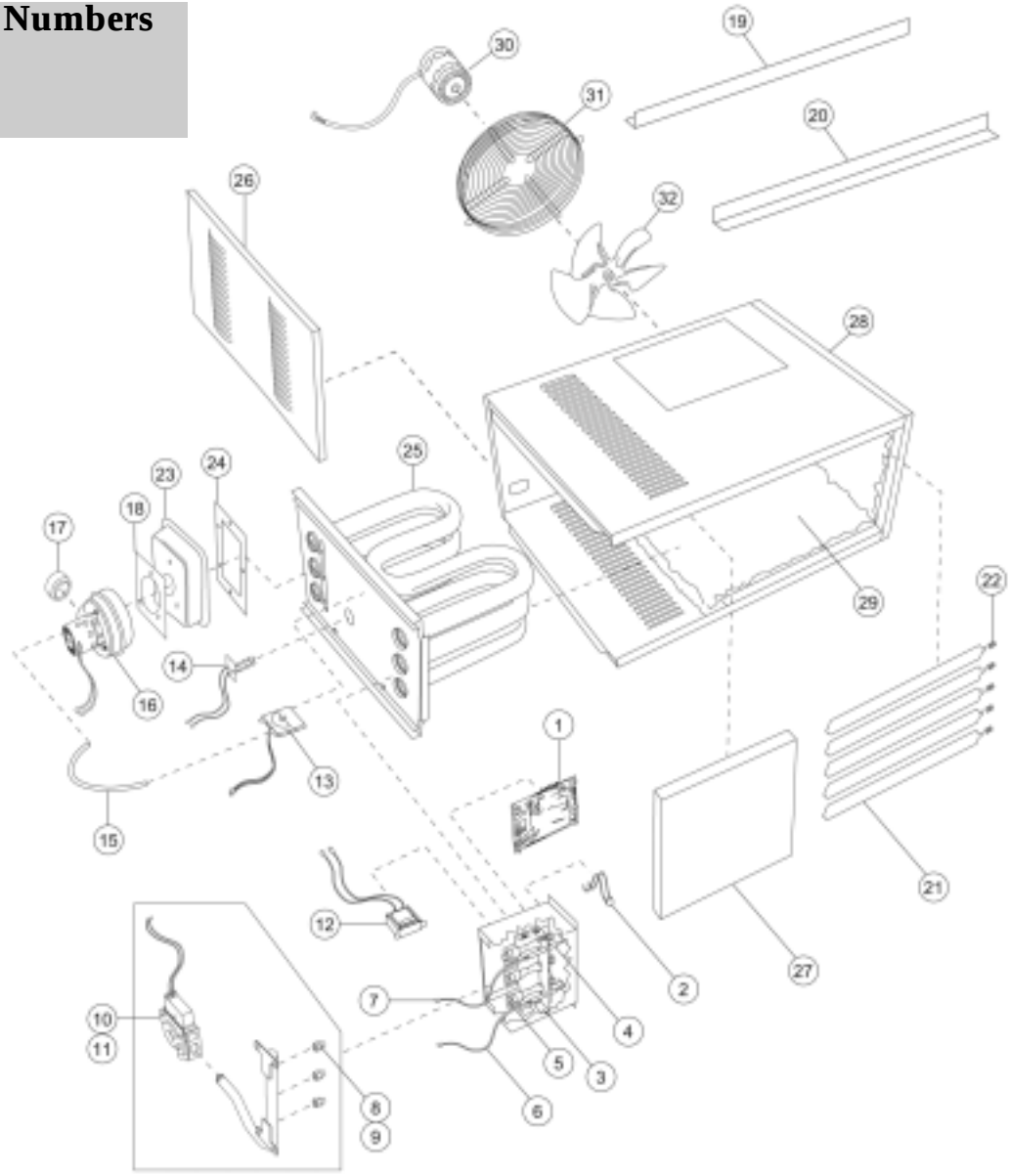
45,000 & 75,000 BTU HeatStar Propane Unit Heater

Model Numbers
MHU45
MHU75



Key No.	MHU45	MHU75	Description
1	60105	60105	CIRCUIT BOARD
2	60015	60015	LIMIT SENSOR
3	60035	60035	ELECTRODE IGNITER
4	60040	60040	ELECTRODE SENSOR
5	60050	60050	BURNER
6	60045	60045	IGNITION LEAD
7	60046	60046	SENSOR LEAD
8	60049	60049	ORIFICE (NAT)
9	60056	60056	ORIFICE (LP)
10	02812	02812	GAS VALVE (NAT)
11	02811	02811	GAS VA LVE (LP)
12	60025	60025	TRANSFORMER
13	60030	60030	PRESSURE SWITCH
14	60022	60022	HI LIMIT SENSOR HEAT EXCH.
15	60031	60031	PRESSURE SWITCH TUBE
16	60020	60020	INDUCED DRAFT MOTOR

Key No.	MHU45	MHU75	Description
17	60130	60140	VENT ADAPTER
18	60135	60135	INDUCED DRAFT MOTOR GA SKET
19	60075	60075	BACK BRACKET
20	60080	60080	FR ONT BRACKET
21	60100	60100	LOUVERS
22	60103	60103	LOUVER SPRING
23	60085	60087	FLUE BOX
24	60090	60092	FLUE BOX GA SKET
25	60065	60068	HEAT EXCHANGER
26	60070	60072	ACCESS DOOR
27	60095	60097	FRONT
28	60110	60112	SIDE DOOR
29	60115	60117	WRAPPER
30	60055	60054	FAN MOTOR
31	60120	60122	FAN GUARD
32	60125	60127	FAN ASSEMBLY

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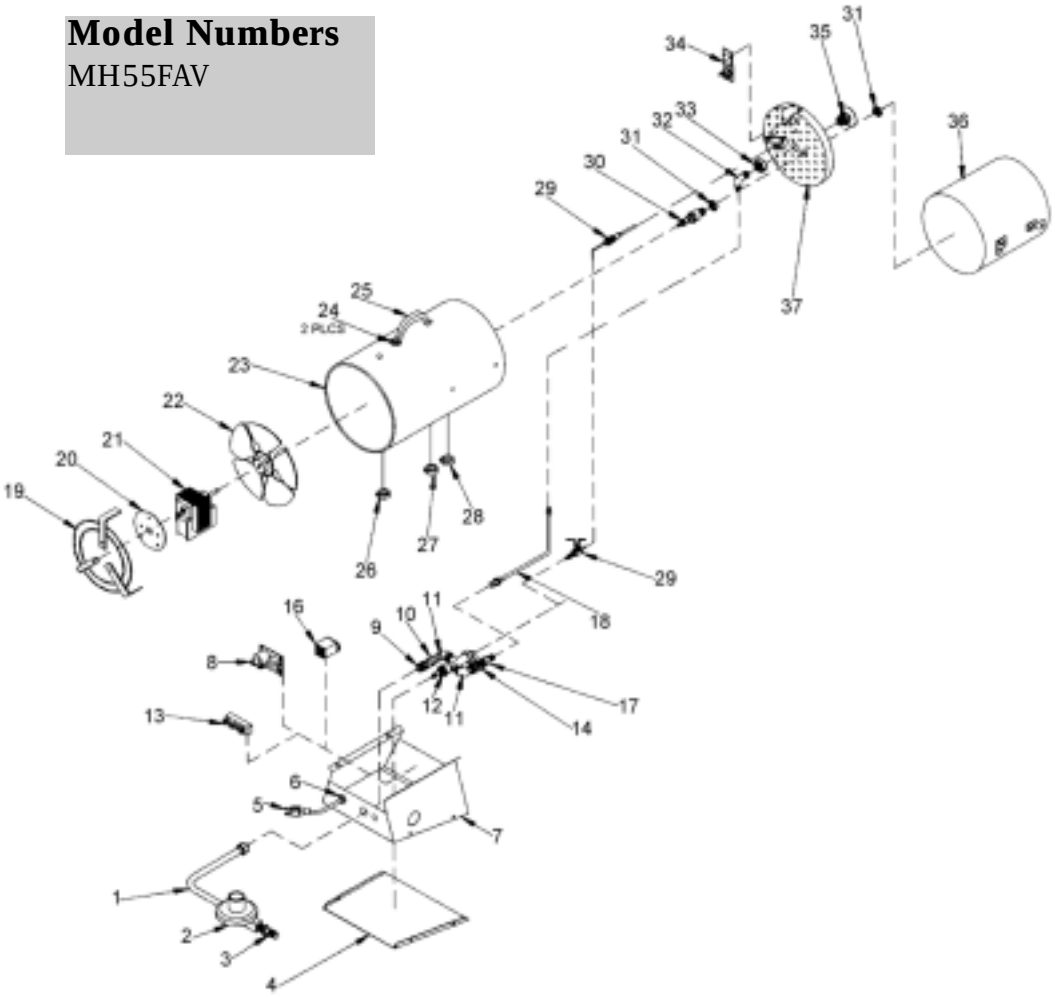
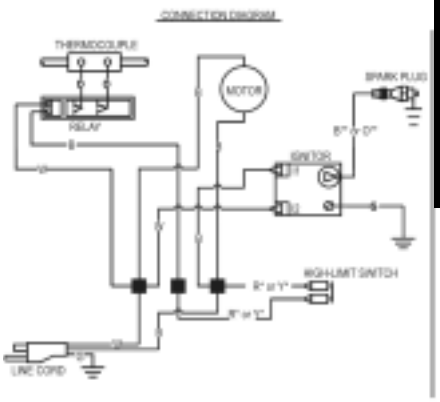
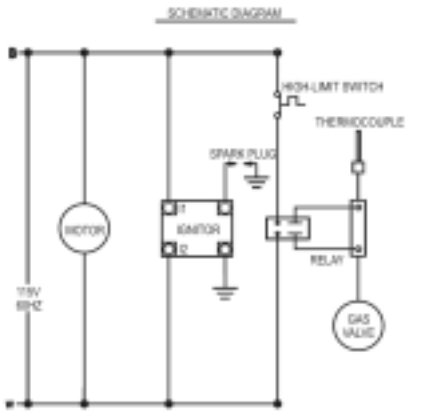
55,000 BTU HeatStar Forced Air Propane Heater

Model Numbers
MH55FAV







Key No.	Part No.	Description
1	6152	Hose Assy, LP
2	6257	Regulator 28” WC
3	6433	POL Excess Flow 1/4 MPT
4	3955	Panel, Bottom
5	1036	Power Cord Assy
6	6223	Strain Relief Bushing
7	1904	Control Box Assy
8	3275	Ignitor HYLO 801
9	6127	Ftg, Male Connector
10	6133	Ftg, Coupling (qty. 2)
11	6265	Ftg, Elbow Street (qty. 2)
12	7285	Thermoelectric Valve
13	6641	Terminal Board
14	7431	Ball Valve
*	6189	Terminal “Y” (qty. 2)
16	1811	Relay Assembly
17	3141	Ftg., Female Connector
18	1935	Fuel Tube Assy
19	1654	Motor Grille Assy
20	3676	Brkt, Motor Mounting
21	1652	Motor Assy
22	6086	Fan, 7”
23	1729	Outer Cylinder Assy
24	7094	Clip Handle Mounting (qty. 2)
25	7095	Handle

Key No.	Part No.	Description
26	6225	Snap Bushing, 5/8
27	6226	Universal Bushing
28	6224	Snap Bushing 1/2
29	6654	Thermocouple 13” Lg w/J.B.
30	1082	Spark Plug
31	3037	Spark Plug Nut (qty. 2)
32	6121	Ftg, Male Elbow
33	3038	Orifice Nut Mtg
34	1751	High Limit Control Assy
35	1930	Orifice Assy, LP
36	1651	Middle Cylinder Assy
37	1931	Flame Holder Assy
*	70056	Manual, Operating Instructions
*	M8733	Label, Model
*	7783	Label, Operating Instructions
*	6374	Label, Electrical Grounding
*	7651	Label, Fuel
*	7503	Label, Wiring Diagram
*	6373	Label, Fan Rotation
*	1667	Hose & Regulator Assembly
*	8203	Label Hang Tag, LP
*	7709	Label, Fuel
*	7704	Label, Warning

* Not shown on exploded view

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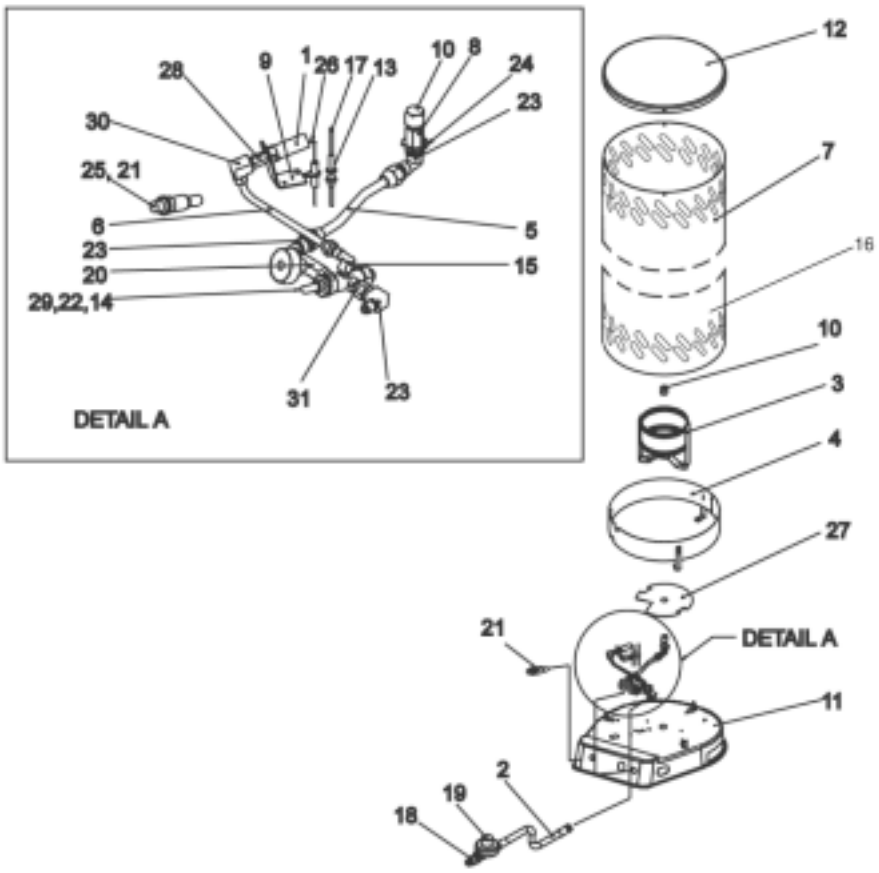
80,000 BTU HeatStar Convection Propane Heater

Model Numbers
MH80CV



Key No.	Part No.	Description
1	8634	Pilot LP Ass'y
2	6152	Hose Ass'y
3	8635	Burner Ring
4	8636	Ring Shield
5	8637	Fuel Tube Ass'y
6	8638	Pilot Tube Ass'y
7	2239	Upper Shell
8	8639	Orifice Adapter
9	8640	Bracket, Pilot Mounting
10	8641	Orifice, LP
11	8642	Base
12	4223	Cap
13	6045	Clip, TC
14	6104	TE Valve
15	6137	Ftg., Elbow Female 1/4 FLRx1/8 FPT
16	2237	Lower Shell
17	8643	Thermocouple
18	6433	POL Excess Flow
19	6255	Regulator
20	8654	Valve, Ball
21	6473	Piezo Ignitor
22	6503	Nut Hex 1/2-28 TE Valve
23	7172	Ftg., Elbow Female 1/4 FPTx 3/8 FLR (qty. 3)
24	8162	External Retaining Ring
25	7161	Piezo Nut

Key No.	Part No.	Description
26	7652	Electrode w/7" wire
27	4293	Heat Shield
28	8644	Pilot Orifice
29	6689	Washer, Flat 1/16 SAE
30	8187	Ftg., Elbow 1/8 FPT x 1/4 CPSN
*	6568	Fitting Adapter 1/4 FPTx1/4 MPT
*	8018	Fitting Adapter 1/8 FPT x 1/4 MPT
*	70486	Manual, Operating Instructions
*	M8760	Label, Model
*	8758	Label, Safety Precautions
*	8759	Label, Safety Precautions
*	8757	Label, Installation
*	8502	Label, Warning
*	8679-80	Label, BTU
*	8206	Hang Tag
*	8651	Ball Valve Knob
*	8655	Ball Valve Knob Insert

* Not shown on exploded view

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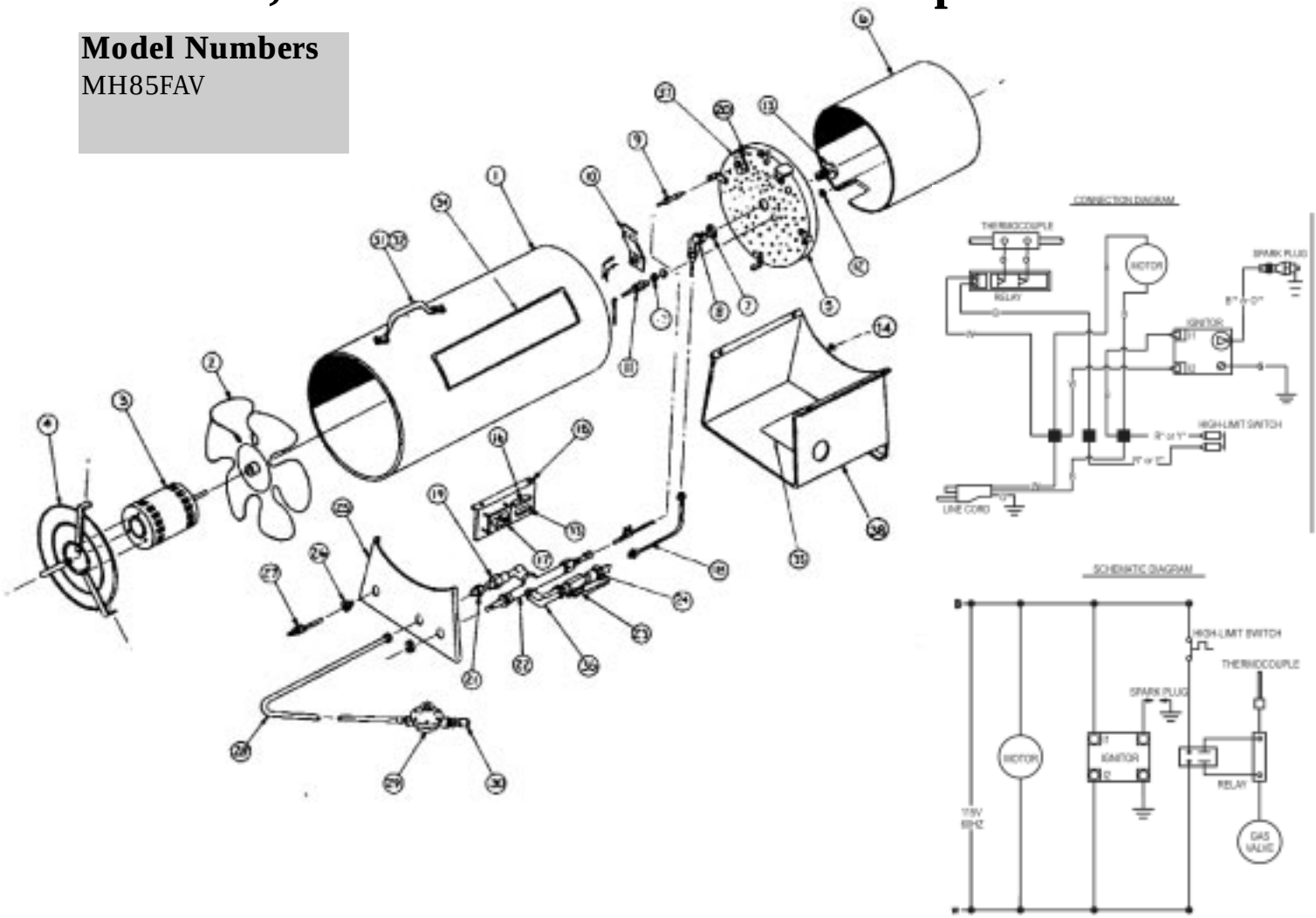
85,000 BTU HeatStar Forced Air Propane Heater

Model Numbers
MH85FAV



Key No.	Part No.	Description
1	1670	Cylinder, Outer Assembly
2	6086	Fan, 7”
3	1551	Motor Assembly, 80-FAS
4	1671	Grille, Motor Mtg/Inlet Assy.
5	1750	Flame Holder Assembly
6	1674	Cylinder, Middle Assembly
7	3038	Nut, Orifice Mounting 3/4-16
8	7433	Fitting, Male Elbow
9	26654	Thermocouple
10	1751	High Limit Control Assembly
11	1083	Spark Plug, 1/8 Gap
12	3037	Nut-Spark Plug (qty. 3)
13	1673	Orifice Assembly
14	1752A	Control Box Assembly
15	3044	Ignition Relay Bracket
16	6641	terminal Board
17	3275	Spark Ignition, 115V
18	1668	Fuel tube Assembly
19	6133	Fitting, Coupling
20	3787	Spacer, TC Bracket
21	6127	Fitting, Male Connector
22	7285	TE Valve
23	7404	Ball Valve, Variable Rate
24	7405	Fitting, Female Connector
25	3690	Control Panel Assembly

Key No.	Part No.	Description
26	6223	Strain Relief Bushing
27	1036	Power Cord
28	6152	Hose Assembly
29	6257	Regulator, 28” W.C.
30	6433	POL Excess Flow
31	7094	Clip Handle Mounting, 3 pcs. (qty. 2)
32	7095	Handle, 3 pcs.
33	1811	Relay
35	7503	Label, Wiring
36	6265	Fitting Elbow (qty. 2)
37	3036	Bracket, TC
38	3775	Side Panel
*	70056	Label, Model
*	M8507	Label, Operating Instructions
*	6374	Label, Electrical Grounding
*	6373	Label, Fan Rotation
*	8203	Label Hang Tag, LP
*	7709	Label, Fuel
*	7704	Label, Warning
*	8508	Label, Operating Instructions
*	7432	Label, BTU Rating (qty. 2)

* Not shown on exploded view

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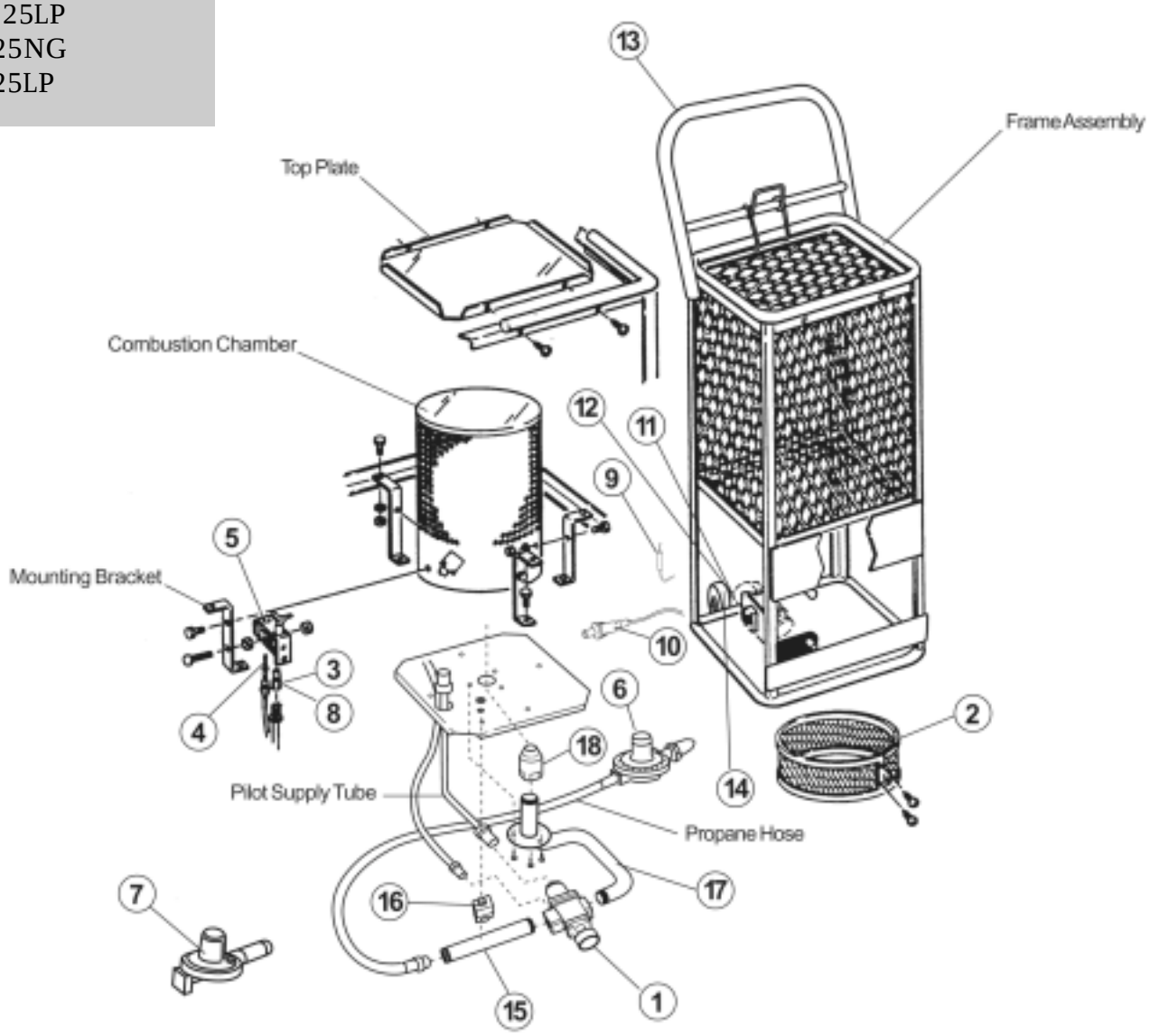
125,000 BTU HeatStar Infrared Propane/Natural Gas Heater

Model Numbers
MH125LP
HS125NG
HS125LP



Key No.	Part No.	Description
1	23510	Manual Control Valve
2	23511	Knob Control Valve
3	04466	Filter/Diffuser
4	23512	Orifice Pilot(MH125LP/HS125LP)
5	23513	Thermocouple
6	23514	Pilot Burner
7	11663	Regulator (MH125LP/HS125LP)
8	11666	Regulator (HS125NG)
9	05374	Orifice Pilot (HS125NG)
10	23515	Ignitor
11	20735	Piezo

Key No.	Part No.	Description
12	23523	Axle With Brackets
13	23517	Handle
14	23518	Wheel
15	23519	Valve Supply Tube
16	23520	Valve Supply Tube Clamp
17	23521	Burner Manifold
18	23522	Burner
19	11412	Hose Assembly 12'
20	11420	Hose Assembly 20'

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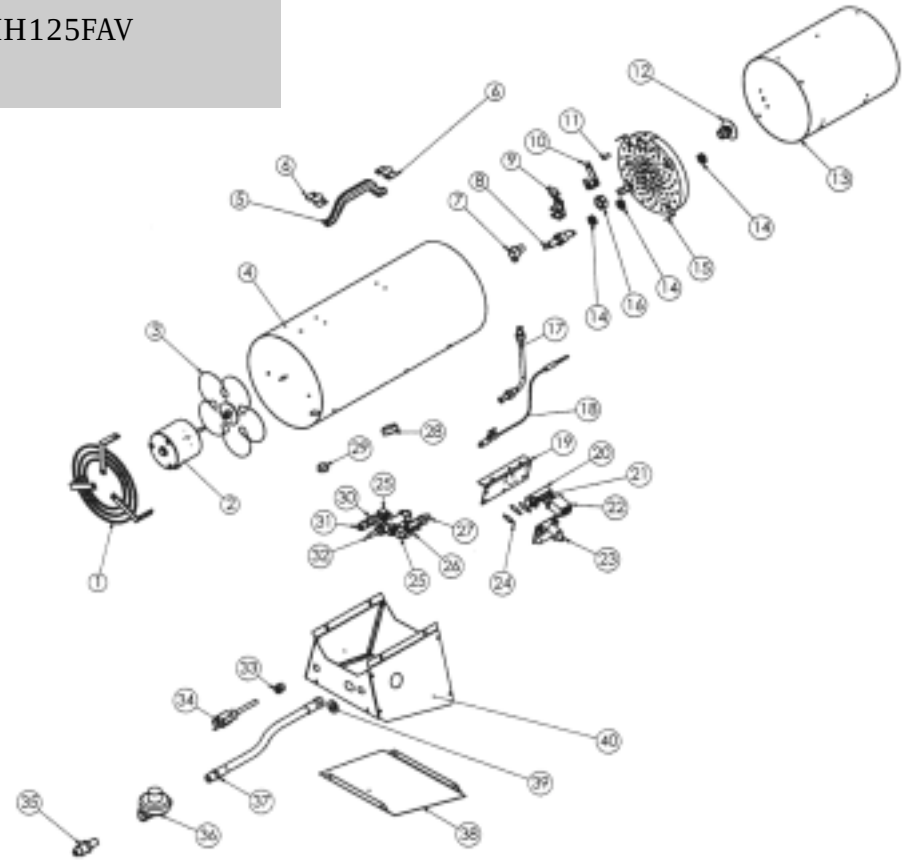
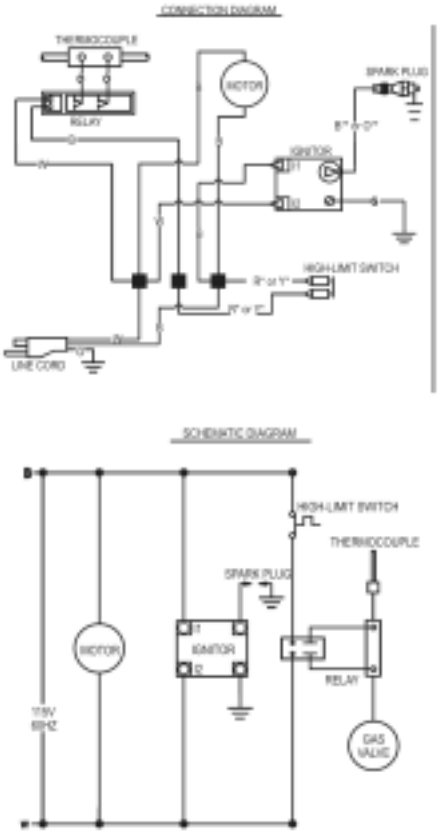
125,000 BTU HeatStar Forced Air Propane Heater

Model Numbers
MH125FAV





Key No.	Part No.	Description
1	1671	Grille, Motor Mtg/Inlet Assy.
2	1551	Motor Assembly, 80-FAS
3	7898	Fan, 8”
4	1998	Cylinder, Outer Assembly
5	7095	Handle
6	7094	Clip Handle Mounting, 3 pcs. (qty. 2)
7	7433	Fitting, Male Elbow
8	1083	Spark Plug, 1/8 Gap
9	2003	Control, High Limit Switch Assy.
10	3036	Brcket, Thermocouple
11	3787	Spacer, TC Bracket
12	2002	Orifice, LP Assembly
13	2001	Cylinder, Middle Assembly
14	3037	Nut-Spark Plug (qty. 3)
15	2004	FLame Holder Assembly
16	3038	Nut, Orifice Mounting 3/4-16
17	1668	Fuel tube Assembly
18	26654	Thermocouple
19	3044	Ignition Relay Bracket
20	6641	terminal Board
21	6065	Spacer, Steel
22	1811	Relay
23	3275	Spark Ignition, 115V
24	6079	Spacer, PC Standoff Nylon
25	6265	Fitting Elbow (qty. 2)
26	7897	Ball Valve, Variable Rate
27	7405	Fitting, Female Connector
28	6227	Snap Bushing, 1-1/4 Nylon
29	7158	Snap Bushing, 3/4 Nylon
30	6133	Fitting, Coupling
31	6127	Fitting, Male Connector
32	7285	TE Valve
33	6223	Strain Relief Bushing
34	1036	Power Cord
35	6433	POL Excess Flow
36	6257	Regulator, 28” W.C.
37	6152	Hose Assembly
38	4019	Bottom Control Box
39	7843	Washer, Flat
40	2005	Control Box Assembly
*	70056	Label, Model
*	6374	Label, Electrical Grounding
*	6373	Label, Fan Rotation
*	8784	Label, Operating Instructions
*	8371	label, BTU Rating (qty. 2)
*	7503	Label, Wiring
*	M8510	Label, Model
*	8203	Label Hang Tag, LP
*	7709	Label, Fuel
*	7704	Label, Warning
*	09054	Hose (Duct) Clamp

* Not shown on exploded view

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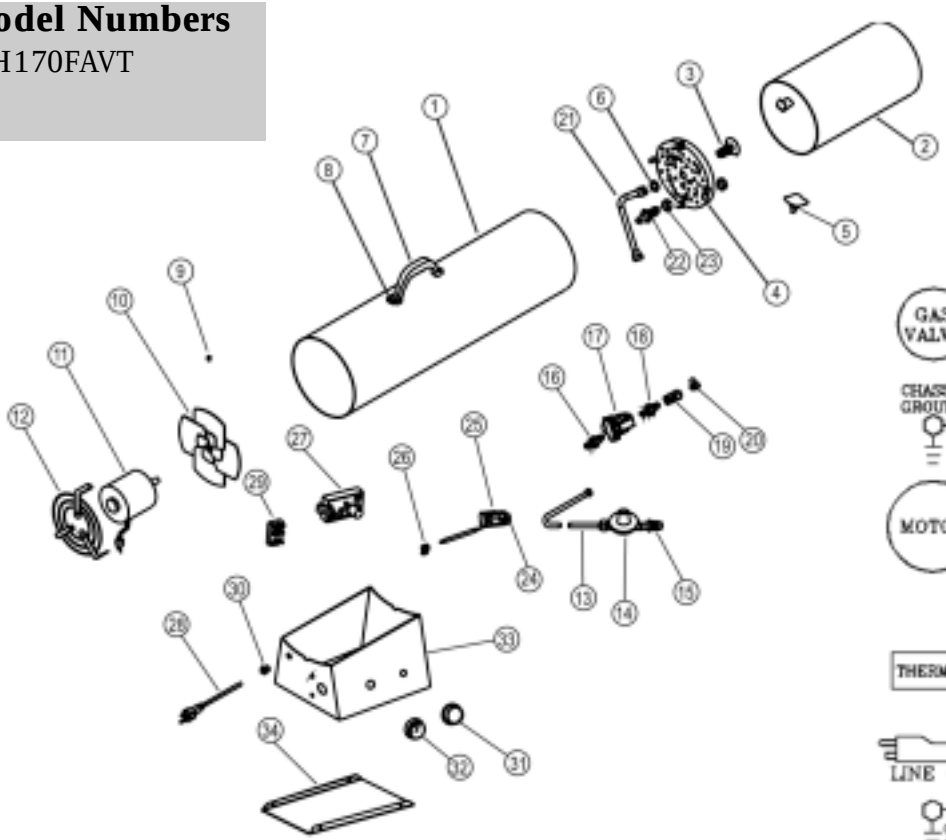
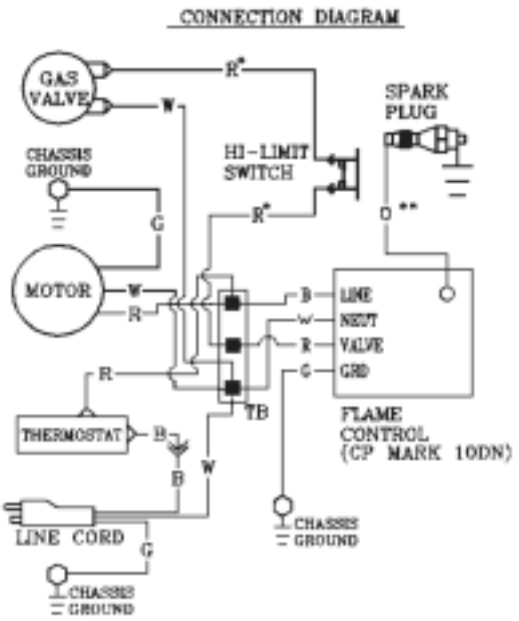
170,000 BTU HeatStar Forced Air Propane Heater

Model Numbers
MH170FAVT





Key No.	Part No.	Description
1	22248	Outer Shell
2	2272	Outer Shell - Model TS
2	22249	Middle Cylinder
3	22250	Orifice Assembly
4	21146	Flame Holder Assembly
5	26168	High Limit Switch
6	23038	Orifice Nut
7	27095	Handle
8	27094	Handle Mounting Clips (qty. 2)
9	26010	Set Screw, Nyloc
10	26074	Fan
11	22251	Motor Assembly
12	22252	Grille, Inlet/Motor Mounting
13	26152	Hose Assembly
14	26257	Regulator, 28" WC
15	26433	POL Excess Flow Valve
16	26122	Male Fitting Conn. 3/8MPT x 3/8SAE FLR
17	26101	Solenoid Valve, Goyen
18	28775	Fitting Close Nipple
19	28777	Burn Rate Adjustment Valve
20	28776	Fitting, Elbow 3/8MPT x 1/2 SAE FLR
21	22253	Fuel Tube Assembly
22	28774	Spark Plug, Flame Sensor
23	23037	Spark Plug Nut
24	24340	Thermostat Mounting Bracket
25	22254	Thermostat Assembly
26	26070	Loop Clamp, 5/16
27	27808	Flame Control, Potted
28	21036	Power Cord Assembly
29	28771	Terminal Board
30	26223	Bushing Strain Relief
31	28772	Knob, Thermostat
32	28773	Knob, Burn Rate Adjustment
33	22255	Control Box
34	22273	Base, Control Box
*	22274	Elevation Plate
*	22275	Elevation knob
*	26375	Label, Elevation Adjustment
*	28769	Label, Safety Precautions
*	28755	Label, General Hazard Warning
*	28733	Label, Model
*	28731	Label, Operating Instructions
*	26410	Label, Thermostate Warning
*	27704	Label, Warning Massachusetts
*	26374	Label, Warning Electrical
*	27789	Label, Wiring Schmatic
*	28203	Label, Hang Tag
*	28679	Label, BTU 170,000
*	70176	Manual, Operating Instructions
*	26225	Snap Bushing, 5/8 (qty. 2)

* Not shown on exploded view

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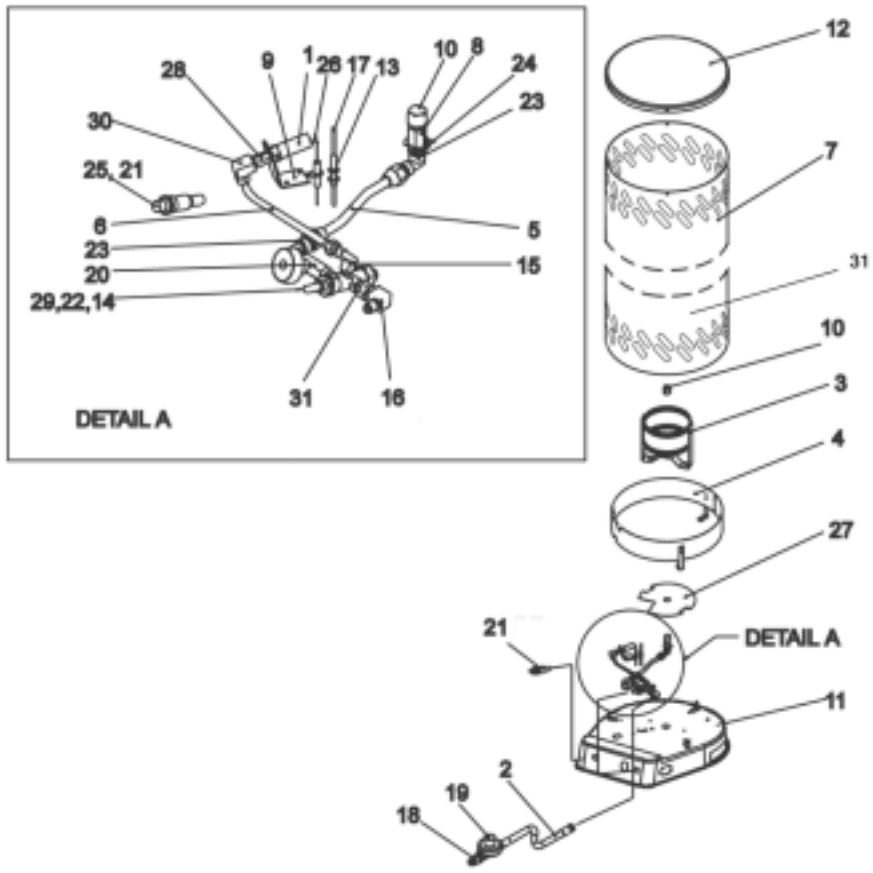
200,000 BTU HeatStar Convection Propane Heater

Model Numbers
MH200CV



Key No.	Part No.	Description
1	8645	Pilot LP Assemby
2	1591	Hose Ass'y, LP
3	8635	Burner Ring Assembly
4	8636	Ring Shield
5	8637	Fuel Tube Assembly
6	8638	Pilot Tube Assembly
7	2240	Upper Shell
8	8639	Orifice Adapter
9	8640	Bracket, Pilot Mounting
10	8646	Orifice, LP
11	8642	Base
12	4223	Cap
13	6045	Clip, TC
14	6104	TE VAlve
15	6137	Ftg., Elbor Female 1/4 FLRx1/8 FPT
16	6138	Ftg., Elbow Female 1/4 FPTx1/4 FLR
17	8643	Thermocouple
18	6252	POL Excell Flow
19	6256	Regulator
20	8654	Valve, Ball
21	6473	Piezo Ignitor (225-VCA/VCB Only)
22	6503	Nut, Hex 1/2-28 TE Valve
23	7172	Ftg., Elbow Female 1/4 FPTx3/8 FLR (qty. 2)
24	8162	External Retaining Ring
25	7161	Piezo Nut

Key No.	Part No.	Description
26	7652	Electrode w/7" Wire
27	4293	Heat Shield
28	8647	Pilot Orifice
29	6689	Washer, Flat 9/16 SAE
30	8187	Fitting, Elbow 1/8 FPTx1/4 CPSN
31	2238	Lower Shell
*	70486	Manual, Operating Instructions
*	8758	Label, Safety Precautions
*	8759	Label, Safety Precautions
*	8757	Label, Installation
*	M8756	Label, Model
*	8502	Label, Warning
*	8679-200	BTU
*	8204	Hang Tag
*	8651	Ball Valve knob
*	8655	Ball Valve Knob Insert

* Not shown on exploded view

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LB White Heaters

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please refer to the Quick Parts Reference Parts Guide for common replacement parts.

LB White
Brand Names Include
Foreman
Guardian
Tradesman
Workman

If you need technical assistance, feel free to call **1-800-362-6951 ext. 2 or e-mail us at techservice@portableheaterparts.com.** Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

BTU Size and Description	Fuel Type	Heater Type	Page No.
CV225	Propane	Convection	201
340A 250,000 BTU output	Propane	Convection	202
341G 250,000 BTU output	Propane	Convection	203
342G 250,000 BTU output	Propane	Convection	203
TS080 80,000 BTU output	Propane	Forced Air	204
TS170 170,000 BTU output	Propane	Forced Air	205
TS350 350,000 BTU output	Propane	Forced Air	206
334G 400,000 BTU output	Propane	Forced Air	207
336 365,000 BTU output	Natural Gas	Forced Air	207
Quick Parts Reference List	**Both**	**All Types**	**208**

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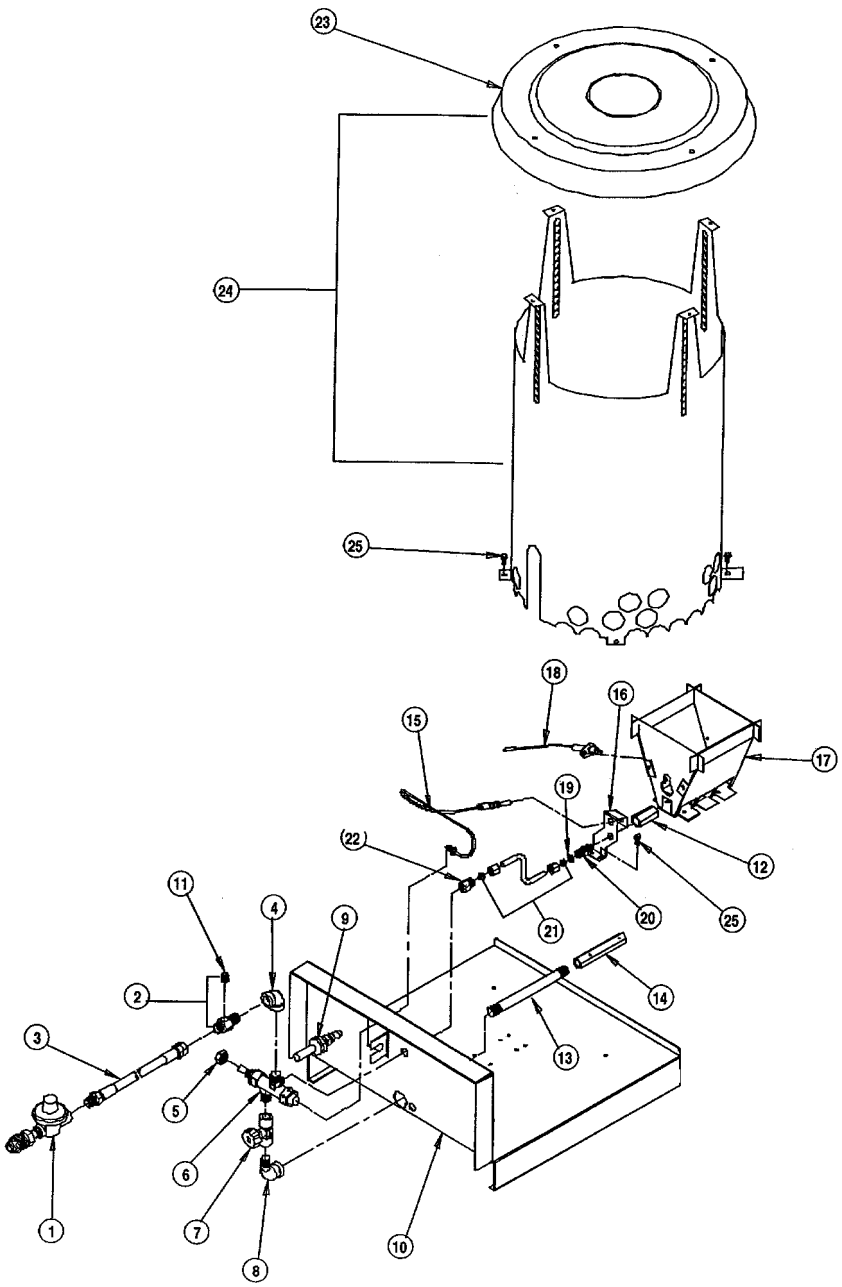
225,000 BTU LB White Propane Heater

Model Numbers

LB White
CV225



Key No.	Part Number	Description
1	23463	Regulator with P.O.L.
2	08435	Adapter, Hose, 1/4 NPT x 9/16-18 L.H. w/Plug
3	23731	Hose, 1/4 in. x 10 ft. w/Adapter
4	01300	Ell, 1/4 NPT
5	20185	Nut, Jam
6	07966	Valve, Pilot Safety
7	20229	Burner Shut Off Valve
8	01425	Ell, Street, 1/4 NPT
9	20280	Igniter, Piezo
10	23375	Base
11	09271	Plug, 1/8 NPT
12	01079	Pilot Head
13	20228	Nipple, 1/4 NPT x 6 in.
14	23392	Orifice, Burner
15	03555	Thermocouple, 18 in.
16	22257	Bracket
17	23380	Burner, w/Electrode
18	20184	Electrode with Wire (Piezo)
19	01722	Filter
20	01230	Orifice, Pilot
21	23730	Tube, Copper w/Compression Nuts & Sleeves
22	23393	Adapter, 1/4” Compression x 1/8 NPT
23	20064	Top
24	23421	Barrel w/Top
25	21183	Screw, #8 x 1/2 (qty. 4)

Parts Available, Not Shown

*	7111NR	Power Coil

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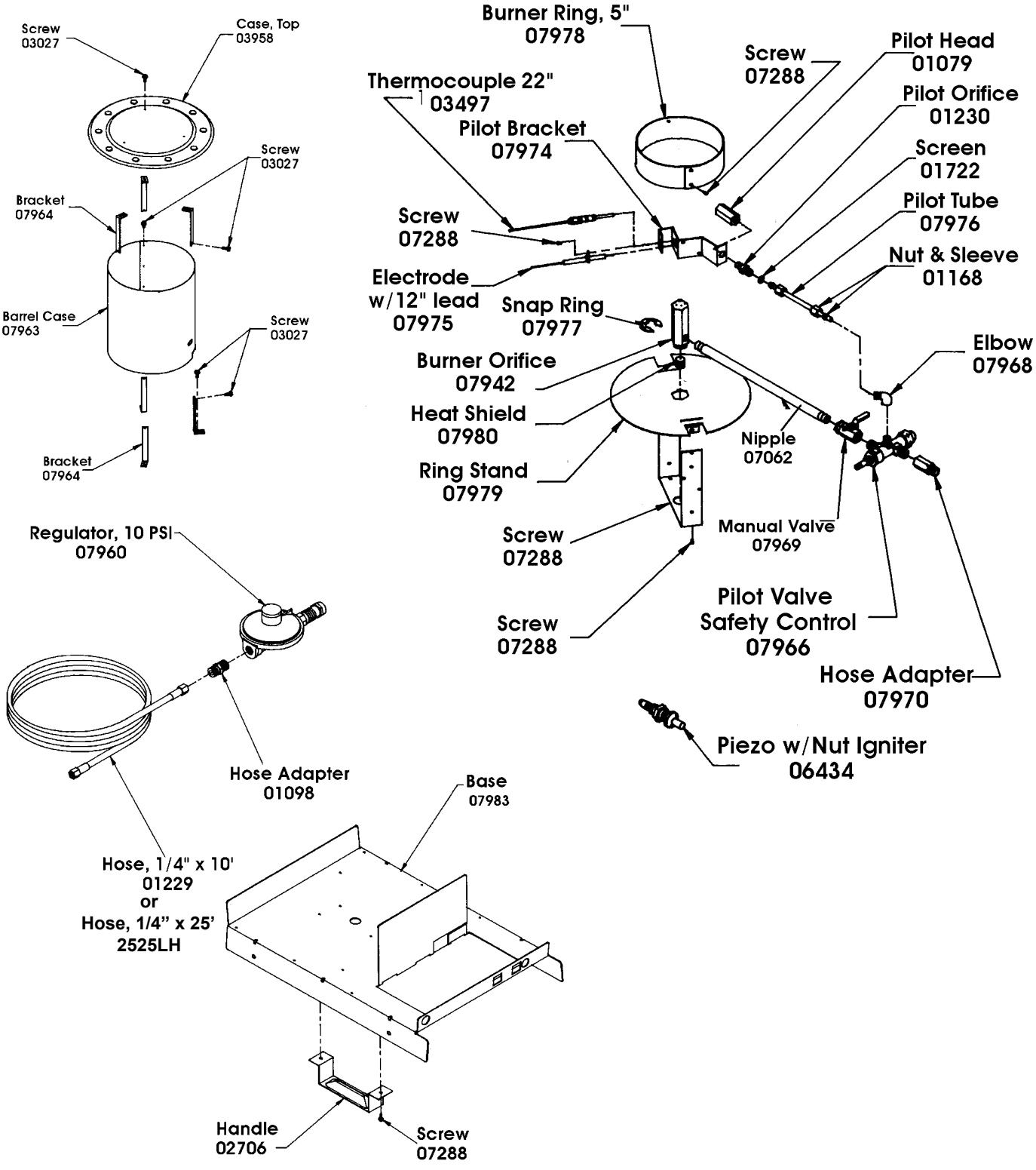
250,000 BTU Convection LB White Propane Heater

Model Numbers

LB White
340A



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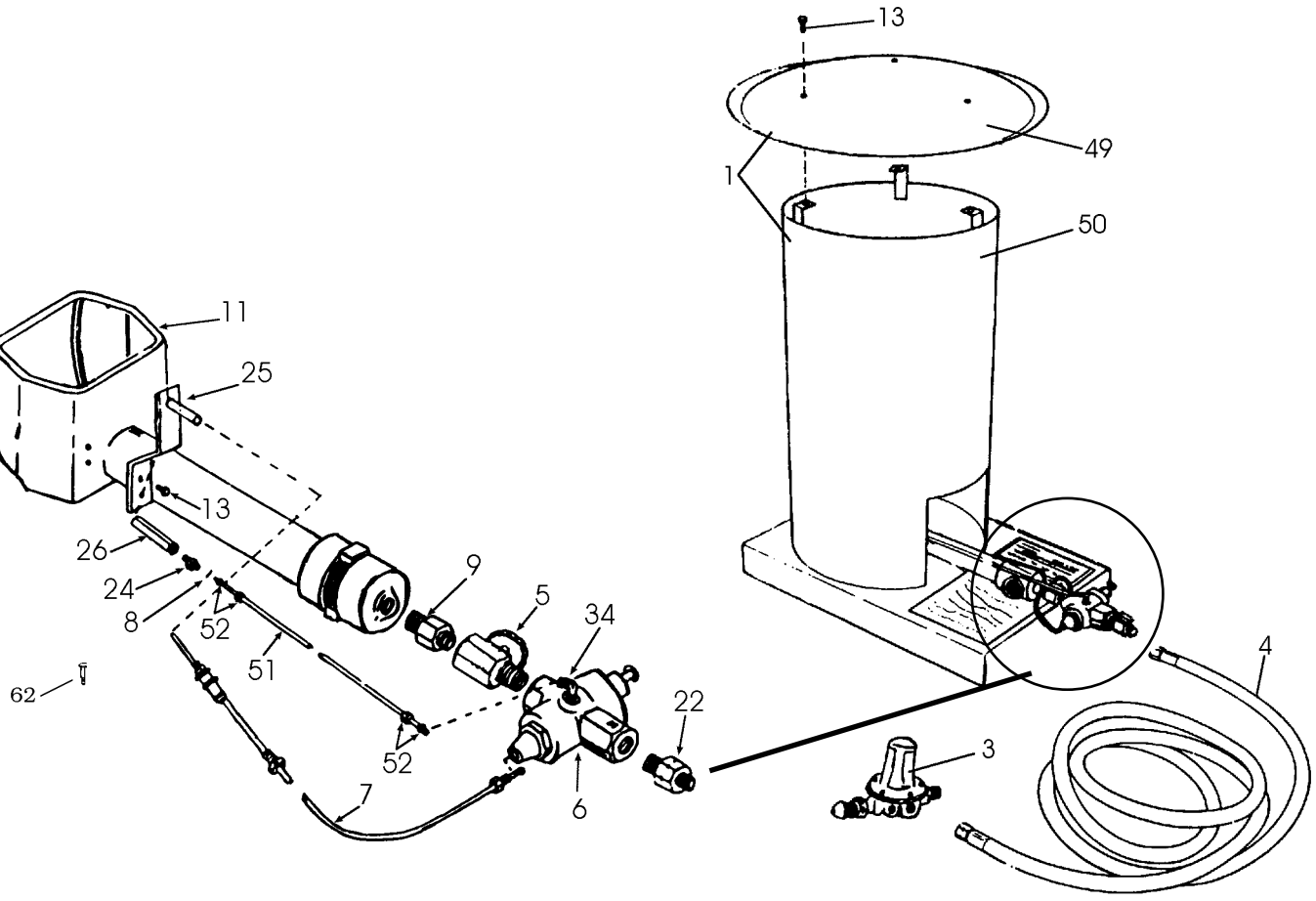
250,000 BTU Convection LB White Propane Heater

Model Numbers

LB White
341G 342G



Key No.	Part No.	Description
1	03560	Case, sheet metal w/stainless steel top - 342G
	04642	Case, sheet metal w/carbon steel top - 341G
3	01106	Regulator w/excess flow valve, pre-set 25 PSI (Coppettone)
4	01229	10 ft. LP-Gas hose w/fittings 9/16-18 LHT
5	20598	Main burner gas control valve #10
6	20356	Valve, pilot safety control
7	01090	Thermocouple - 18 in.
8	01722	Screen, Pilot
9	01329	Orifice, Burner (Propane only)
11	03989	Casting, burner
13	01213	Screws, Machine 10-24 x 3/8
22	01098	Coupling, 1/4 in. NPT x 9/16 - 18 LHT
24	01230	Mixer, Pilot light - propane only w/screen
25	03202	Bracket, pilot and thermocouple w/screws
26	01079	Pilot light burner head

Key No.	Part No.	Description
34	01069	Elbow, 1/8" compression
49	01330	Top,stainless steel Model 342
	04618	Top, carbon steel (not shown) painted
50	01331	Case, sheet metal less top, painted
51	07077	Tubing copper w/nuts & sleeves
52	01168	Female compression nut & sleeve for 1/4" copper tubing
	01151	Bolt, 1/4 - 20 x 1/2 inch secures burner to heater
	04629	Torch only consists of items NO.: 5, 9, and 11
	01468	Automatic shut-off control consists of items No.: 6, 7, 8, 13, 22, 24, 25, 26, 51 and 52
61	05838	Assy. burner complete, less hose & regulator
	05839	Assy, burner w/hose & regulator consists of items No.: 3, 4, 5, 6, 7, 8, 9, 11, 13, 22, 24, 25, 26, 34, 51
62	N/A	Screw
*	2525LH	25' LP Gas Hose

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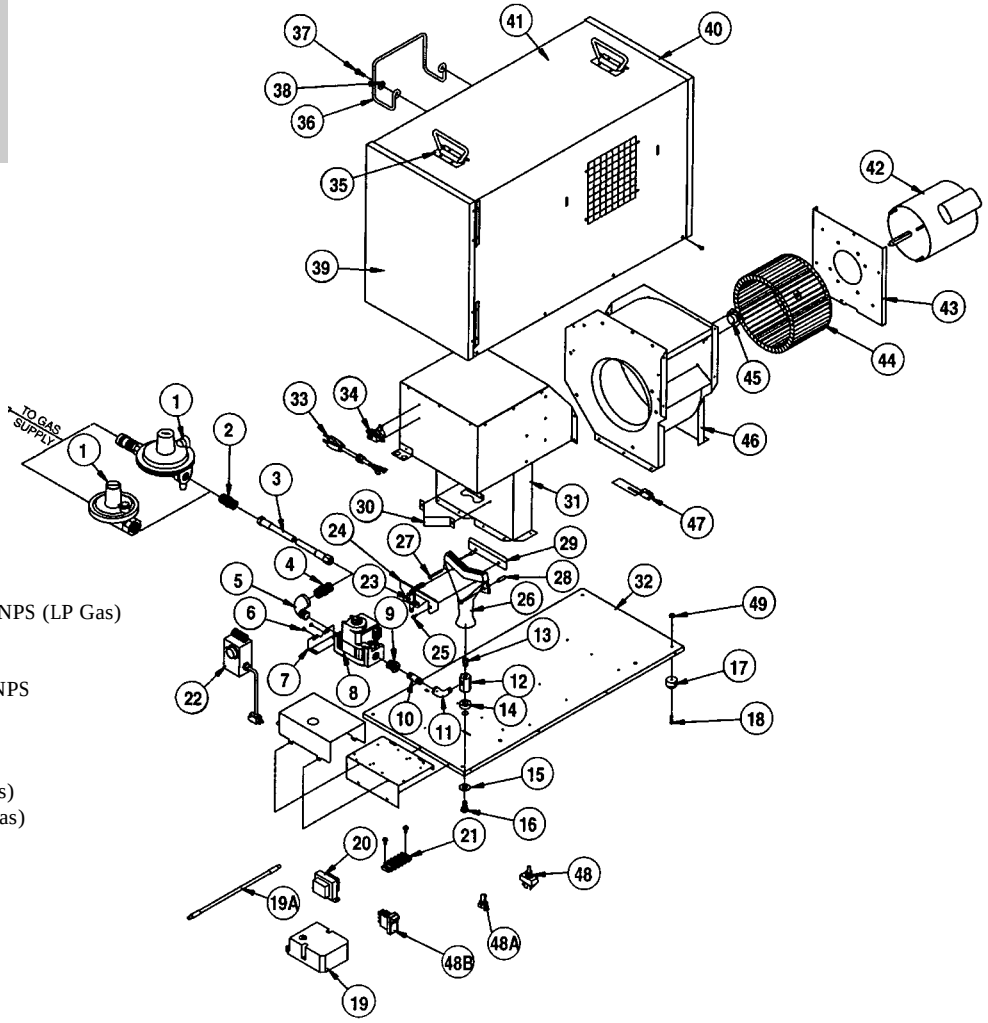
80,000 BTU Forced Air LB White Heater

Model Numbers

LB White
TS080



Key No.	Part Number	Description
1	08990	Regulator (LP Gas)
	21999	Regulator (Nat.Gas)
2	06655	Adapter, 3/8" NPT x 1/2" NPS (LP Gas)
3	20531	Hose, 1/2" x 10' (LP Gas)
	20704	Hose, 1/2" x 10' (Nat Gas)
4	02894	Adapter, 1/2" NPT x 1/2"NPS
5	09309	Ell
6	09425	Screw
7	09760	Bracket
8	09368	Valve, Gas Control (LP Gas)
	09428	Valve, Gas Control (Nat Gas)
9	01519	Bushing
10	02453	Nipple
11	01425	Street Elbow, 1/4"
12	09759	Holder, Orifice
13	09753	Orifice, Burner (LP Gas)
	09754	Orifice Burner (Nat Gas)
14	07905	Spacer, Burner
15	01589	Washer
16	02692	Bolt
17	08932	Bumper
18	08944	Screw
19	08810	Control Ignition
19A	09348	Wire, Ignition Control
20	08922	Transformer
21	08253	Terminal Strip
22	09454	Thermostat Kit
23	06479	Igniter
24	08906	Bracket
25	01213	Screw
26	06479	Burner
27	02688	Screw
28	02687	Spacer
29	08942	Bracket Flame Arrestor
30	08933	Bracket, Burner
31	08952	Chamber, Heat
32	08909	Base
33	09139	Cord, Power
34	03933	Switch, High Limit, Burner End (275 F)
35	08534	Handle
36	08936	Hanger, Hose
37	01254	Bolt
38	03054	Washer

Key No.	Part Number	Description
39	08917	Case Access Panel, Burner End
40	08916	Case Access Panel, Motor End
41	09970	Case Assembly w/Access Panels
42	08920	Motor
43	08146	Mount, Motor
44	03531	Fan
45	09821	Switch, High Limit (250 F)
46	09961	Housing Fan w/Motor, Fan & High Limit Switch (LP Gas)
	22067	Housing Fan w/Motor, Fan & High Limit Switch (Nat Gas)
47	21186	Switch, Air Proving w/Bracket
48	09915	Switch, Heat/Vent (Toggle)
48A	09916	Boot
49	08811	Light, LED w/Leads
50	03109	Nut
*	08978	12" x 12' Black Duct
*	20865	12" x 12' White Duct
*	21177	Diffuser for Duct (attach to duct)
*	09389	Diffuser for Heater (attach to heater)

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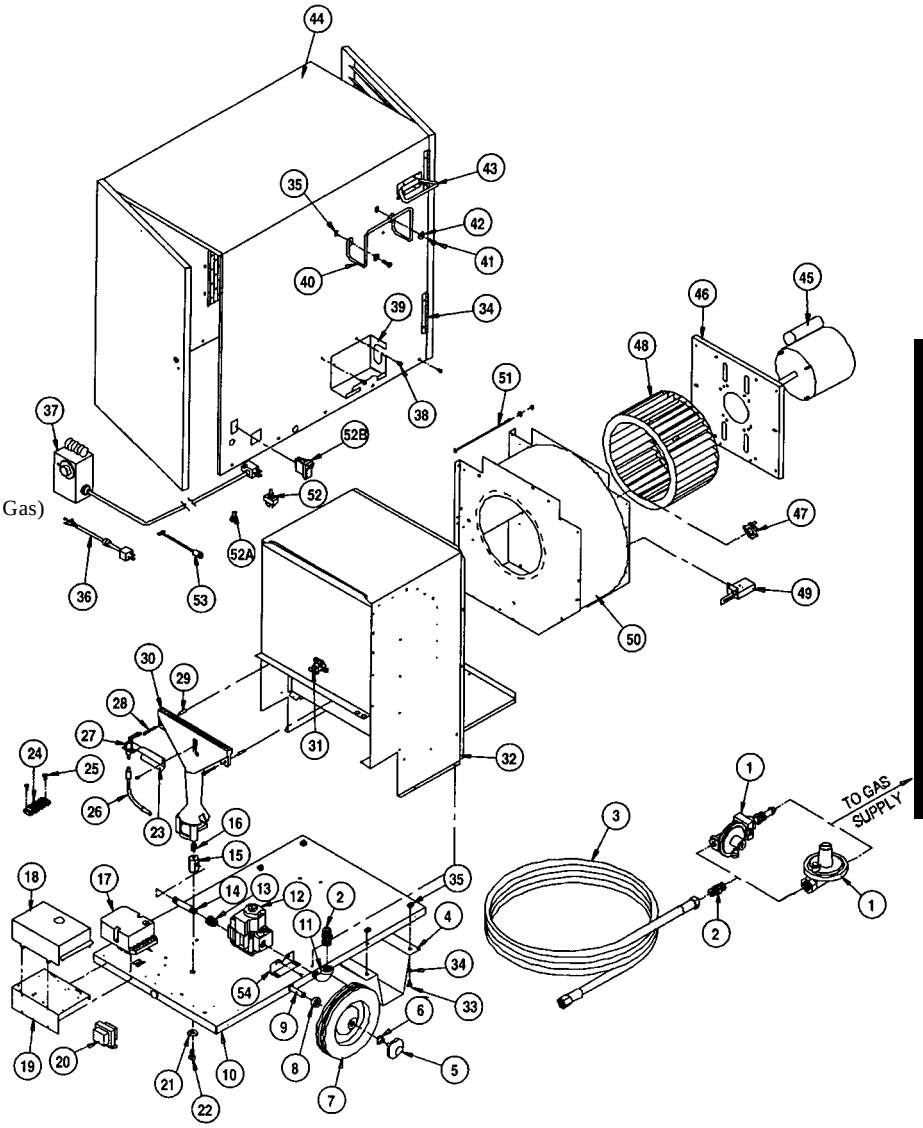
170,000 BTU Forced Air LB White Heater

Model Numbers

LB White
TS170



Key No.	Part Number	Description
1	09911	Regulator (LP Gas)
	09795	Regulator (Nat.Gas)
2	02894	Adapter, 1/2" NPT x 1/2" NPS (LP Gas)
3	20704	Hose, 1/2" x 10'
4	20960	Kit, Leg Bracket
5	07187	Cap, Hub
6	01095	Nut
7	09160	Wheel
8	07905	Spacer
9	06421	Axle
10	09150	Base
11	09309	Ell
12	09368	Valve, Gas Control (LP Gas)
	09428	Valve, Gas Control (Nat Gas)
13	01519	Bushing
14	03115	Nipple
15	09759	Holder, Orifice
16	09786	Orifice, Burner (LP Gas)
	09787	Orifice, Burner (Nat Gas)
17	08810	Control Ignition
18	08964	Cover
19	08963	Bracket
20	08922	Transformer
21	01589	Washer
22	02692	Bolt
23	09783	Bracket, Igniter
24	08253	Terminal Strip
25	02330	Screw
26	09348	Wire, Igniter
27	06479	Igniter
28	02688	Screw
29	02687	Spacer
30	03453	Burner
31	03933	Switch, High Limit, Burner End (275 F)
32	09133	Chamber Heat
33	11267	Bolt
34	02513	Washer
35	07708	Cage Nut
36	09917	Cord, Power
37	21790	Thermostat Kit, w/20 ft. Cord
38	07288	Screw
39	09919	Bracket, Regulator Storage
40	08936	Hanger, Hose
41	11254	Bolt
42	03054	Washer
43	08534	Handle
44	09927	Case, Assembly
45	20169	Motor
46	08647	Mount, Motor

Key No.	Part Number	Description
47	09784	Switch, High Limit Motor End (190 F)
48	09050	Fan
49	09925	Switch, Air Proving
50	09789	Housing, Fan w/Motor, Fan, High Limit and Air Proving Switches
51	09239	Bolt, 7-1/2"
52	09915	Switch, Heat/Vent, Toggle
52A	09916	Boot
52B	22017	Switch, Heat/Vent, Rocker w/LED
53	08811	Light, LED w/Leads
54	09760	Bracket, Gas Control
*	08978	12" x 12' Black Duct
*	20865	12" x 12' White Duct
*	21177	Diffuser for Duct (attach to duct)
*	09389	Diffuser for Heater (attach to heater)

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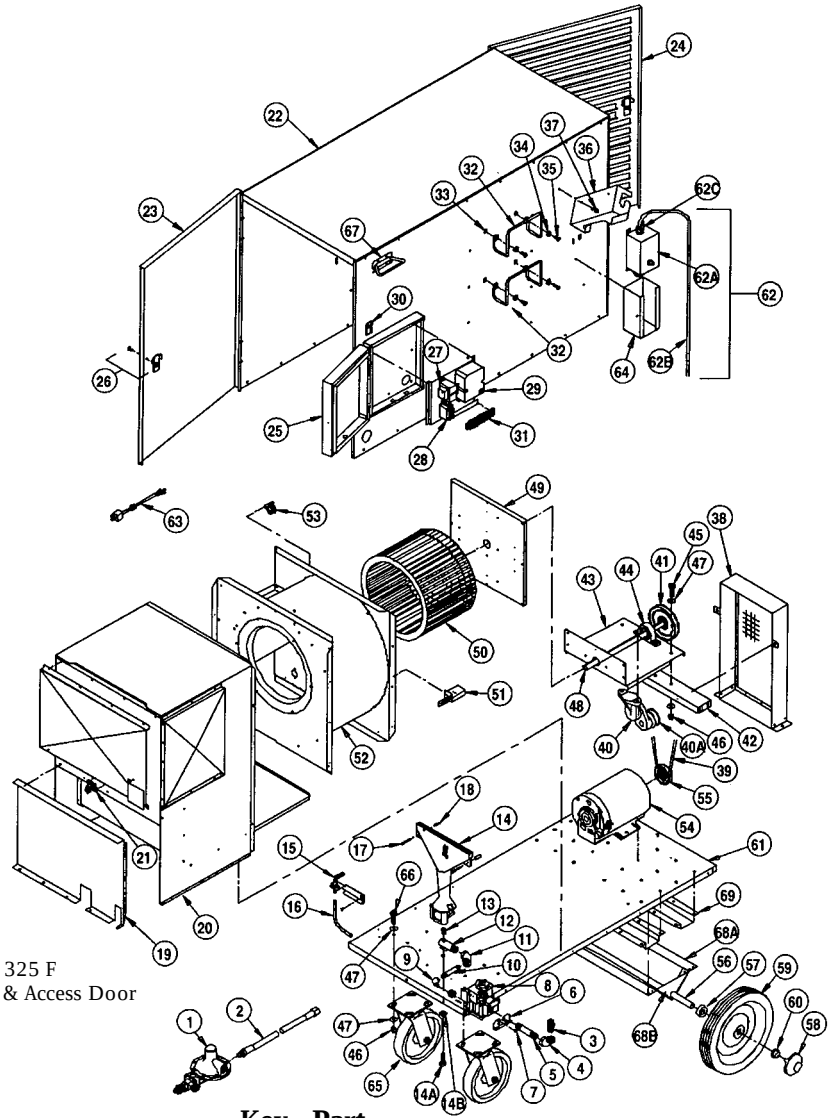
350,000 BTU Forced Air LB White Heater

Model Numbers

LB White
TS350



Key No.	Part Number	Description
1	22919	Regulator (LP Gas)
	23136	Regulator (Nat.Gas)
2	23078	Hose, 3/4" x 15'
	23079	Hose, 3/4" x 10'
3	22426	Adapter, 3/4 NPT x 3/4 NPS
4	22404	Elbow
5	23143	Nipple, 3/4 x 4-1/2"
6	23132	Bracket, Gas Control
8	22897	Valve, Gas Control (LP Gas)
	22900	Valve, Gas Control (Nat. Gas)
9	01359	Elbow, 1/2 NPT
10	07148	Nipple
11	01426	Elbow, 1/2 NPT
12	09291	Manifold
13	22898	Orifice, Burner (LP Gas)
	22901	Orifice, Burner (Nat. Gas)
14	21781	Burner
14A	02692	Bolt, Burner
14B	01589	Washer
15	06479	Igniter
16	22948	Lead, Ignition
17	02688	Screw, Burner Mounting
18	02687	Spacer, Burner
19	22903	Panel, Burner Access
20	22890	Chamber, Heat
21	81108	Switch, High Limit, Burner End, 325 F
22	22877	Case Assembly w/Control Panel & Access Door
23	22881	Panel, Case Access, Burner
24	22880	Panel, Case Access, Motor
25	22875	Panel, Control Box Cover
26	09199	Latch
27	09615	Transformer
28	08685	Relay
29	08810	Control Ignition
30	22017	Switch, Selectro w/L.E.D.
31	22905	Terminal Strip
32	08936	Hose and Thermostat Hanger
33	07708	Cage Nut
34	03054	Washer, 1/4
35	11254	Bolt, 1/4 - 20 x 3/4
36	22917	Bracket, Regulator Storage
37	07288	Screws, Regulator Storage Bracket & Thermostat Storage Bracket
38	23058	Guard, Belt
39	23129	Belt
40	23096	Belt Tensioner
40A	23098	Idler
41	23037	Sheave, Fan
42	22889	Bracket, Support
43	22888	Platform, Bearing
44	22949	Bearing, Pillow Block
45	03147	Bolt, 3/8 - 16 x 1-1/4
46	05100	Nut, 3/8 - 16
47	01589	Washer, 3/8
48	22950	Shaft, 3/4 Dia. with 3/16 keyway
49	22887	Panel, Fan Access
50	22868	Fan

Key No.	Part Number	Description
50A	22955	Key, 3/16", Fan & Motor Sheaves & Fan Shaft
51	22946	Switch, Air Proving
52	22882	Housing, Fan
53	09784	Switch, High Limit, Fan End, 190 F
54	22908	Motor
55	23038	Sheave, Motor
56	22951	Axle, Wheel
57	07905	Spacer
58	07187	Hub Cap
59	22914	Wheel
60	01095	Cap, Retaining
61	22904	Base
62	22920	Thermostat Kit w/20 ft. Cord
62A	09785	Thermostat
62B	22921	Cord, Thermostat
62C	08948	Connector, Liquid Tight
63	22907	Cord, Power, 10 ft.
64	23111	Bracket, Thermostat Storage
65	23130	Wheel, Caster
66	03141	Bolt, 5/16 - 18
67	08534	Handle, Case
68A	23112	Bracket, Axle Mount
68B	23113	Bracket, Axle
69	23110	Support Motor

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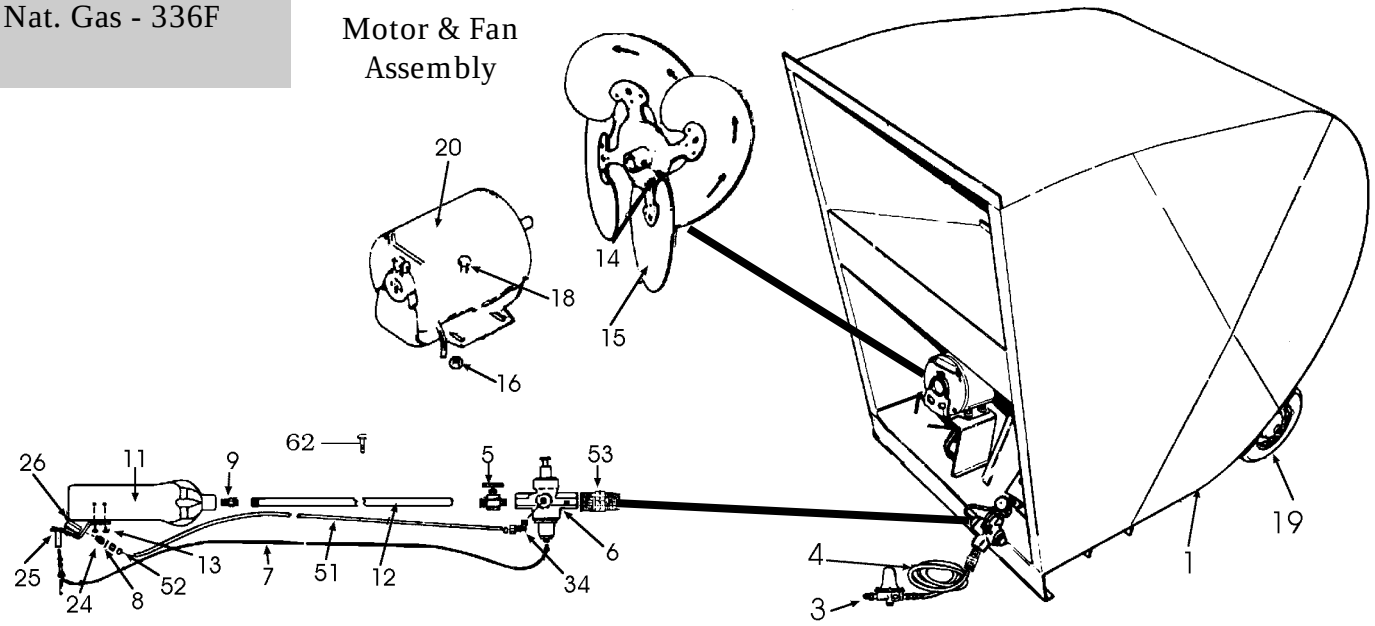
400,000 Prop./365,000 BTU Forced Air Natural Gas LB White Heater "Big Bertha"

Model Numbers

LB White
L.P. - 334G
Nat. Gas - 336F



61 - Propane [Vapor] Burner Assembly without Hose or Regulator

Key No.	Part No.	Description
1	01341	Sheet Metal Case
3	01106	Regulator w/excess flow valve pre-set 25 PSI No. 334
	01104	Nat Gas Regulator
4	01229	10ft. LP-Gas hose - No. 334 w/fittings 9/16 - 18 LHT
	20714	1/2" Hose w/fittings for Model #336
5	20598	Main Burner gas control valve 334
	01120	Main Burner gas control valve 336
6	20356	Valve, Pilot Safety control
7	01020	Thermocouple - 30 in - No. 334 only
	03066	Thermocouple - 36 in - No. 336 only
8	01722	Screen, Pilot
9	03416	Burner Orifice - Propane Only
	01081	Burner Orifice - Nat. Gas
11	01014	Torch casting
12	01018	Torch Handle
13	01213	Pilot light bracket screws 10-24 x 3/8
14	01343	Set Screw - 1/4 in
15	01342	Fan. w/set screw
16	01237	Motor bolt nut - 5/16 in.
18	02747	Motor Bolts - washer head
19	01099LB	Wheels
20	07181	Motor

Key No.	Part No.	Description
24	01230	Pilot light mixer - propane only
	01520	Pilot light mixer - Nat. Gas
25	03202	Bracket, pilot and thermocouple
26	01079	Pilot light burner head
34	01069	1/8 in. compression elbow
51	02550	Pilot light copper tubing-LP
	03033	Pilot light copper tubing - Nat. Gas
52	01168	Female compression nut and sleeve for 1/4 in. tubing
53	01098	Adapter, 1/4 in. N.P.T. x 9/16-18 LHT
61	07281	Burner assembly without hose and regulator (propane only)
	20344	Burner assembly with hose and regulator consists of items No.: 3, 4 5, 6, 7, 8, 9 , 11, 12, 13, 24, 25, 26, 34, 51, 52 & 53
	01473	Torch only consists of items No.: 5, 9, 11, and 12
	07283	Automatic gas shut-off control consists of items No.: 6, 7, 8, 13, 24, 25, 26, 34, 51, 52, & 53
62	NLA	Screw

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LB White Construction Heater Quick Parts Reference (LP Gas Only)

Model#	Motor	Thermocouple/	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Transformer	Other
286 286A	20290	NA	098884-01	05547	02808	05550 Air Proving 05559 Flapper 07264 Limit(286A)	06479	06772	05560	20704 (10ft)	NA	05548 Manual Shut-Off Valve 05568 Thermostat With Bracket 07027 Wiring Harness
286B	20290	NA	098884-01	05547	02808	05550 Air Proving 05559 Flapper 05566 Limit (350)	06479	06772	05560	20704 (10ft)	NA	05548 Manual Shut-Off Valve 05568 Thermostat With Bracket 07027 Wiring Harness
290 290A	20554	NA	098884-01	05547	02684	07264 Limit (350) 02680 Air Proving 02441 Flapper	06479	09911	02691	20704 (10ft)	NA	05548 Manual Shut-Off Valve 05568 Thermostat With Bracket 09160 Wheel (Qty 2)
290B	20554	NA	098884-01	05547	02684	05566 Limit (350) 02680 Air Proving 02441 Flapper	06479	09911	02691	20704 (10ft)	NA	05548 Manual Shut-Off Valve 05568 Thermostat With Bracket 07027 Wiring Harness
292A	03830	NA	05145 (Call)	05144	03831	03933 Limit (275) 04605 Air Flow 03948 Flame Rod	03849	04655	05303	04784 (10ft)	06979	03834 On-Off Switch 05148 Wiring Harness 04724 Valve Cock Assy
292E	03830	NA	098884-01	05309	21575	06739 Air Proving 06687 Backflash	07160	06772	05851	20704 (10ft)	NA	03834 On-Off Switch 07027 Wiring Harness
296 296A	03830	NA	03327	03837	03831	03933 Limit (275) 04605 Air Flow 03948 Flame Rod	03849	03836	03860	03535 (10ft)	06979	03834 On-Off Switch
296B	03830	NA	05145 (Call)	05144	03831	03933 Limit (275) 04605 Air Flow 03948 Flame Rod	03849	04655	03860	04784 (10ft)	06979	03834 On-Off Switch 05148 Wiring Harness
296D	03830	NA	05549	05144	21575	05688 Flame Rod 07161 Sail Switch	05687	06772	05849	20704 (10ft)	NA	03834 On-Off Switch 05845 Valve Cock Assy 05854 Fuse, Thermal Assy
296E	03830	NA	098884-01	05309	21575	06739 Air Proving 06687 Backflash	07160	06772	06685	20704 (10ft)	NA	03834 On-Off Switch 07027 Wiring Harness
301A	03830	NA	03327	03986	03831	03933 Limit (275) 04605 Air Flow 03843 Flame Rod	03849	03836	03860	03535 (10ft)	06979	03834 On-Off Switch
304B	04785	NA	05145 (Call)	05867	04794	03933 Limit (275) 03326 Air Flow 03843 Flame Rod 09224 Tilt	03849	04791	04665	20704 (10ft)	06979	03834 On-Off Switch 04977 Valve Cock Assy 05829 Thermostat 05149 Wiring Harness
304D	04719	NA	098884-01	08022	06697	06664 Backflash 07161 Sail 09224 Tilt	06873 Plug OR 20312 Electrode	08997	06571	20704 (10ft)	NA	03834 On-Off Switch 05829 Thermostat 04720 Capacitor 06871 Throttling Valve
324	07181	01090	NA	02990 Solenoid AND 20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	21788	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	NA	06537 Thermostat 01099 Wheel 20598 Manual Shut Off Valve
324E 324F	07181	01090	NA	20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	01106	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	NA	20598 Manual Shut Off Valve 01098 Hose Adapter 01099 Wheel
324G	07181	01020	NA	02812 Solenoid AND 20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	01106	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	NA	20598 Manual Shut Off Valve 01098 Hose Adapter 01099 Wheel
324H	07181	01090	NA	07966 Thermo Electric 7111NR Power Coil	01227	NA	NA	01106	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	NA	20229 Manual Shut Off Valve 01098 Hose Adapter 01099 Wheel

LB White Construction Heater Quick Parts Reference (LP Gas Only)

Model#	Motor	Thermocouple/	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Transformer	Other
326	07181	01020	NA	02990 Solenoid AND 20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	21788	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	NA	06537 Thermostat 20598 Manual Shut Off Valve
326H	07181	01020	NA	02812 Solenoid AND 20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	01106	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	NA	06537 Thermostat 01098 Hose Adapter 01099 Wheel
326J	07181	01020	NA	02990 Solenoid AND 07966 Thermo Electric 7111NR Power Coil	01227	NA	NA	01106	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	NA	07339 Thermostat 01098 Hose Adapter 01099 Wheel
328	07181	01090	NA	02990 Solenoid AND 20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	21788	01230 Pilot 03415 Burner	01229 (10ft) 2525LH (25ft)	NA	06537 Thermostat 20598 Manual Shut Off 01098 Hose Adapter
328F	07181	01090	NA	02990 Solenoid AND 20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	01106	01230 Pilot 03415 Burner	01229 (10ft) 2525LH (25ft)	NA	06537 Thermostat 20598 Manual Shut Off Valve 01099 Wheel
330 330G	07181	01020	NA	02990 Solenoid AND 20356 Thermo Electric 7111NR Power Coil	01227	NA	NA	21788	01230 Pilot 03415 Burner	01229 (10ft) 2525LH (25ft)	NA	06537 Thermostat 01098 Hose Adapter 01099 Wheel
334 334G	07181	01020	NA	20356 Thermo Electric 7111NR Power Coil	01342	NA	NA	21788	01230 Pilot 03416 Burner	01229 (10ft) 2525LH (25ft)	NA	01098 Hose Adapter 20229 Manual Shut Off Valve 01099 Wheel (Qty 2)
334H	07181	01020	NA	20356 Thermo Electric 7111NR Power Coil	01342	NA	NA	01106	01230 Pilot 03416 Burner	01229 (10ft) 2525lh (25ft)	NA	01098 Hose Adapter 20229 Manual Shut Off Valve 01099 Wheel (Qty 2)
343G	20290	03497	NA	02309	02808	05566 Limit (350)	NA	01225	02689 Pilot 03411 Burner	01229 (10ft) 2525lh (25ft)	NA	05568 Thermostat 05548 Manual Shut Off Valve
346A	01174	01036	NA	01196	02808	02662 Limit	NA	01225	02729 Pilot 02805 Burner	01229 (10ft) 2525lh (25ft)	NA	01208 Thermostat
346E 346F	20290	03497	NA	02309	02808	05566 Limit (350)	NA	06772	02729 Pilot 03418 Burner	20543 (10ft)	NA	05548 Manual Shut Off Valve 05567 High Limit Switch Cover 00815 Sediment Trap
346G 346H 346J	20290	03497	NA	02309	02808	05566 Limit (350)	NA	01225	02689 Pilot 03418 Burner	01229 (10ft) 2525lh (25ft)	NA	05568 Thermostat 05548 Manual Shut Off Valve
346K	20290	03497	NA	86302	02808	05566 Limit (350)	NA	06772	02729 Pilot 03418 Burner	20543 (10ft)	NA	05548 Manual Shut Off Valve 05567 High Limit Switch Cover 00815 Sediment Trap
350	01174	01036	NA	02309	01190	02662 Limit	NA	06772	02689 Pilot 01296 Burner	5010 (10ft) 5025 (25ft)	NA	3850FTG Hose to Regulator Fitting 01208 Thermostat 01420 Manual Shut Off Valve
377J 377J-3 377J-4	20554	03497	NA	02309	03531	05566 Limit (350) 02680 Sail Switch	NA	06772	02689 Pilot 03518 Burner	20704 (10ft)	NA	06537 Thermostat 05548 Manual Shut Off Valve 03535 Hose to Regulator Fitting
408J 408J-3 408J-4	20554	01090	NA	02309	02684	05566 Limit (350) 02680 Sail Switch	NA	09911	02689 Pilot 02691 Burner	20704 (10ft)	NA	06537 Thermostat 05548 Manual Shut Off Valve
CP100A CP100B	03830	NA	08810 (24Volt)	22039	21575	06739 Air Proving 06687 Back Flash	07160	06772	05851	20704 (10ft)	08260	08240 On-Off Switch 08811 L.E.D. With Leads 03536 Hose to Regulator Fitting
CP100BSP	03830	NA	08810 (24Volt)	22039	21575	07161 Sail Switch 06687 Back Flash	07160	06772	05851	20704 (10ft)	08260	08240 On-Off Switch 08811 L.E.D. With Leads 03536 Hose to Regulator Adapter

LB White Construction Heater Quick Parts Reference (LP Gas Only)

Model#	Motor	Thermocouple/	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Transformer	Other
CP100C	21830	21811	NA	21808 7111NR Power Coil	21829	21855 Back Flash	21803	21856	21802	21841 (10ft)	21813 Spark Igniter	21816 Relay with Clips 21806 Heat Adjustment Valve 06654 Hose Adapter
CP155A CP155B	03830	NA	08810 (24Volt)	22039	21575	06739 Air Proving 06687 Back Flash	07160	06772	06685	20704 (10ft)	08260	08240 On-Off Switch 08811 L.E.D. With Leads 03536 Hose to Regulator Adapter
CP155BSP	03830	NA	08810 (24Volt)	22039	21575	07161 Sail Switch 06687 Back Flash	07160	06772	06685	20704 (10ft)	08260	08240 On-Off Switch 08811 L.E.D. With Leads 03536 Hose to Regulator Adapter
CP155C	03830	NA	22301 (24 Volt)	22400 (24 Volt)	21575	06687 Back Flash 06739 Air Proving	07160	06772	06685	21841 (10ft)	06979	22213 Thermostat 03834 On-Off Switch
CP155C	03830	NA	07637 (120 Volt)	05144 (120 Volt)	21575	06687 Back Flash 06739 Air Proving	07160	06772	06685	21841 (10ft)	NA	07027 Wire Harness 03834 On-Off Switch 22213 Thermostat
CP155C (Diagnostic)	03830	NA	22301 (24 Volt)	22400 (24 Volt)	09347	06687 Back Flash 06739 Air Proving	07160	06772	06685	21841 (10ft)	06979	22299 L.E.D. Lens 05549 Manual Valve 22213 Thermostat
CP380A CP380B	04719	NA	08810 (24Volt)	08813 (Qty 2) or 08814 Kit	06697	06664 Back Flash 06739 Air Proving	20312	08997	20410	20719 (10ft)	08958	04720 Capacitor 08811 L.E.D. With Leads 08240 On/Off Switch
CP380BSP	04719	NA	08810 (24Volt)	08813 (Qty 2) or 08814 Kit	06697	06664 Back Flash 07161 Air Flow 20076 Tilt Switch	07160 Plug OR 20312 Electrode	08997	06751	20704 (10ft)	08958	06871 Throttle Valve 04720 Capacitor 08811 L.E.D. With Leads
CP400A	04719	NA	098884-01	08022	06697	06739 Air Proving 06664 Back Flash	20312	08997	20410	20704 (10ft)	NA	04720 Capacitor 06871 Throttle Valve 05829 Thermostat
CP400B	04719	NA	07637	08022	22302	22526 Air Proving 22294 Back Flash	20312	22315	20410	21841 (10ft)	NA	06971 Throttle Valve 04720 Capacitor 03834 On/Off Switch
CP400B (Diagnostic)	04719	NA	22301 (24 Volt)	22313	22302	22526 Air Proving 22294 Back Flash	20312	22315	20410	21841 (10ft)	06979	22213 Thermostat 04720 Capacitor 22299 L.E.D.
CP400T	04719	NA	07637	08802	06697	06739 Sail 20411 Back Flash	20312	08997	20410	20704 (10ft)	NA	03834 On/Off Switch 05829 Thermostat 04720 Capacitor
CP400T (Diagnostic)	04719	NA	08810 (24Volt)	08813 (Qty 2) or 08814 Kit	06697	06739 Sail 20411 Back Flash	20312	08997	20410	20704 (10ft)	08958	05829 Thermostat 04720 Capacitor 08811 L.E.D.
CS060	20290	03497	NA	02309	02808	05566 Limit (350)	NA	06772	02689 Pilot 03418 Burner	01517 (10ft)	NA	05548 Manual Valve 06537 Thermostat
CS080C CS080D	08920	NA	08810 (24Volt)	22076	03531	03933 Limit (275) 09821 Limit (250)	06479	08990	09753	20704 (10ft)	08922	09454 Thermostat
CS080E	08920	NA	08810 (24Volt)	22076	03531	03933 Limit (275) 09821 Limit (250) 21186 Air Proving	06479	08990	09753	20704 (10ft)	08922	09454 Thermostat
CS170D CS170E	20169	NA	08810 (24Volt)	22076	09050	03933 Limit (275) 09784 Limit (190) 09925 Air Proving	06479	09911	09786	20704 (10ft)	08922	09160 Wheel (Qty 2) 06421 Axle 09454 Thermostat
CT080A CT080B	08920	NA	08810 (24Volt)	22039	03531	03933 Limit (275)	06479	08990	08918	20704 (10ft)	08922	09454 Thermostat 08872 L.E.D. With Leads

LB White Construction Heater Quick Parts Reference (LP Gas Only)

Model#	Motor	Thermocouple/	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Transformer	Other
CT170A CT170B	22112	NA	08810 (24Volt)	22039	09050	03933 Limit (275)	06479	09911	09130	20704 (10ft)	08922	09160 Wheel (Qty 2) 09454 Thermostat 08872 L.E.D. With Leads
TS080C TS080D	08920	NA	08810 (24Volt)	22076	03531	03933 Limit(275) 09821 Limit (250)	06479	08990	09753	20243 (10ft)	08922	09454 Thermostat 09915 Heat/Vent Toggle Switch 08811 L.E.D. With Leads
TS080E	20292	NA	08810 (24Volt)	22076	03531	03933 Limit (275) 09821 Limit (250) 21186 Air Proving	06479	08990	09753	20243 (10ft)	08922	09454 Thermostat 22017 Heat/Vent Rocker Switch 08811 L.E.D With Leads
TS170C	20169	NA	08810 (24Volt)	22076	09050	03933 Limit (275) 09784 Limit (190) 09925 Air Proving	06479	09911	09786	20704 (10ft)	08922	09160 Wheel (Qty 2) 09915 Heat/Vent Toggle 09454 Thermostat
TS170D	20169	NA	08810 (24Volt)	22076	09050	03933 Limit (275) 09784 Limit(190) 09925 Air Proving	06479	09911	09786	20704 (10ft)	08922	22017 Rocker Switch (with L.E.D.) 09454 Thermostat 09160 Wheel (Qty 2)
TS350	22908	NA	08810 (24Volt)	22897	22868	81108 Limit (325) 09784 Limit (190) 22946 Air Proving	06479	22919	22898	23079 (10ft) 23078 (15ft)	09615	08685 Relay 22017 Rocker Switch (with L.E.D.) 22914 Wheel (Qty 2) 23130 Caster (Qty 2) 23129 Belt 22920 Thermostat

LB White Quick Parts Reference (Natural Gas)

Model#	Motor	Thermocouple/	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Transformer	Other
298E	03830	NA	098884-01	05309	21575	06739 Air Flow 06687 Back Flash	07160	06713	06686	20704	NA	03834 On-Off Switch 07028 Wiring Harness
303A	04785 (With Capacitor)	NA	6183NR (Call)	05335	05336	03933 Limit 03326 Air Flow 03843 Flame Rod 04803 Tip Switch	03849	04799	05323	NA	06979	03934 On-Off Switch 05829 Thermostat 04805 Thermostat Knob
336 336F 336G	07181	03066	NA	20356 Thermo Electric 7111NR Power Coil	01342	NA	NA	01104	01520 Pilot 01081 Burner	20704	NA	09698 Manual Control Valve 01099 Wheel (Qty 2)
345G	20290	03497	NA	02309	02808	05566 Limit	NA	01326	02740 Pilot 03412 Burner	05301	NA	05568 Thermostat 05548 Manual Shut-Off Valve
348A	01174	01036	NA	01196	02808	02662 Limit	NA	01326	02740 Pilot 01514 Burner	20704	NA	01208 Thermostat 02741 Pilot Mixer
348E 348F	20290	03497	NA	02309	02808	05566 Limit	NA	01326	02740 Pilot 01297 Burner	20504	NA	05548 Manual Shut-Off Valve 05568 Thermostat 05567 High Limit Switch Cover
348G 348H 348J	20290	03497	NA	02309	02808	05566 Limit	NA	01326	02740 Pilot 01297 Burner	05301	NA	05568 Thermostat 05548 Manual Shut-Off Valve 05567 High Limit Switch Cover
348K	20290	03497	NA	86302	02808	05566 Limit	NA	01326	02740 Pilot 01297 Burner	05301	NA	05568 Thermostat 05548 Manual Shut-Off Valve 05567 High Limit Switch Cover
352	01174	01036	NA	02309	01190	02326 Limit	NA	01326	02740 Pilot 01297 Burner	NA	NA	01208 Thermostat 01420 Valve Cock 02741 Pilot Mixer

LB White Quick Parts Reference (Natural Gas)

Model#	Motor	Thermocouple/	Ignition Control/ D.S.I.	Valve: Safety/ Auto Control	Fan/Squirrel Cage	Safety Switches	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Transformer	Other
379J 379J-3 379J-4	20554	03497	NA	02309	03531	05566 Limit 02680 Sail Switch	NA	02736	02740 Pilot 03519 Burner	20704	NA	05548 Manual Shut-Off Valve 06537 Thermostat
410J 410J-3 410J-4	02683	01090	NA	02309	02684	05566 Limit 02680 Sail Switch	NA	02736	06978 Pilot 02735 Burner	20704	NA	05548 Manual Shut-Off Valve 06537 Thermostat
CP155BSN	03830	NA	08810	06623	21575	06687 Back Flash 05689 Sail Switch	07160	06713	06683	20704	08260	08240 On-Off Switch 08810 L.E.D. With Leads
CP155C	03830	NA	22301 (24 Volt)	22400 (24 Volt)	21575	06687 Back Flash 06739 Air Proving	07160	06713	06686	20504	06979	05548 Manual Shut-Off Valve 22213 Thermostat 03834 On-Off Switch
CP155C	03830	NA	07637 (120 Volt)	05144 (120 Volt)	21575	06687 Back Flash 06739 Air Proving	07160	06713	06686	20504	NA	05548 Manual Shut-Off Valve 22213 Thermostat 03834 On-Off Switch
CP155C (Diagnostic)	03830	NA	22301	22400	09347	06887 Back Flash 06739 Air Proving	07160	06713	06686	20504	06979	22299 L.E.D. Lens 05548 Manual Shut-Off Valve 08240 On-Off Switch
CS060	20290	03497	NA	02309	02808	05566 Limit	NA	01326	02740 Pilot 01297 Burner	20704	NA	06537 Thermostat 05548 Manual Shut-Off Valve
CS080C CS080D	08920	NA	08810	09368	03531	03933 Limit (275) 09821 Limit (250)	06479	21999	09754	20531	08922	09454 Thermostat
CS080E	20292	NA	08810	09368	03531	03933 Limit 21186 Air Proving	06479	21999	09754	20531	08922	09454 Thermostat

LB White Quick Parts Reference (Convection)

Model#	Thermocouple	T.E. Safety Valve	Igniter/Electrode	Regulator	Orifice: Pilot/Burner	Hose	Other
320	01090	20356 7111NR Power Coil	NA	06228	01230 Pilot 01329 Burner	01229 (10ft) 2525LH (25ft)	20598 Manual Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
320B	01090	07966 7111NR Power Coil	NA	21788	01230 Pilot 22353 Burner	01229 (10ft) 2525LH (25ft)	20229Burner Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
322	01090	20356 7111NR Power Coil	NA	21788	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	20598 Burner Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
322F	01090	20356 7111NR Power Coil	NA	01106	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	20598 Burner Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
322G	01090	07966 7111NR Power Coil	NA	01106	01230 Pilot 01591 Burner	01229 (10ft) 2525LH (25ft)	20229 Burner Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
340	03497	07966 7111NR Power Coil	NA	07960	01230 Pilot 07942 Burner	01229 (10ft) 2525LH (25ft)	07969 Burner Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
340A	03497	07966 7111NR Power Coil	06434 Piezo 07975 Electrode	07960	01230 Pilot 07942 Burner	01223 (10ft) 2525LH (25ft)	07969 Burner Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
340 340A	03497	07966 7111NR Power Coil	20280 Piezo 07975 Electrode	21722	01230 Pilot 07942 Burner	20703 (10ft)	07969 Burner Shut-Off Valve 01098 Hose Adapter G1629 P.O.L. Fitting
341	01090	20356 7111NR Power Coil	NA	21788	01230 Pilot 01329 Burner	01229 (10ft) 2525LH (25ft)	20598 Manual Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
341G	01090	20356 7111NR Power Coil	NA	01106	01230 Pilot 01329 Burner	01229 (10ft) 2525LH (25ft)	20598 Manual Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
341H 342G	01090	20356 7111NR Power Coil	NA	21788	01230 Pilot 01329 Burner	01229 (10ft) 2525LH (25ft)	20598 Manual Shut-Off Valve 01098 Hose Adapter 01722 Pilot Screen
380 380J	03497	01540	NA	06772	02689 Pilot 06237 Burner	20704 (10ft)	03536 Hose Adapter
CV100	03555	07966 7111NR Power Coil	20280 Piezo 20184 Electrode	21722	20213 Pilot 20187 Burner	20496 (10ft)	20229 Burner Shut-Off Valve 01098 Hose Adapter 20391 Inlet Screen
CV200	03497	07966 7111NR Power Coil	20280 Piezo 07975 Electrode	21722	01230 Pilot 07942 Burner	20703 (10ft)	07969 Burner Shut-Off Valve 01098 Hose Adapter 01722 Inlet Screen
CV225	03555	07966 7111NR Power Coil	20280 Piezo 20184 Electrode	23463	01230 Pilot 23392 Burner	23731 (10ft)	20229 Burner Shut-Off Valve 08435 Hose Adapter
CV250	03555	07966 7111NR Power Coil	20280 Piezo 20184 Electrode	21722	20212 Pilot 20189 Burner	20496 (10ft)	20229 Burner Shut-Off Valve 01098 Hose Adapter

Space Ray Heaters

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please call one of our technicians for assistance.

If you need technical assistance, feel free to call **Portable Heater Parts at 1-800-362-6951 or e-mail us at techservice@portableheaterparts.com**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Brand Names Include:
Space Ray

HEATER INDEX

Model and Description	Fuel Type	Heater Type	Page No.
Space Ray RFPA10B, RFPA21A	LP or NG	Radiant	215
Space Ray RFPA25	LP or NG	Radiant	216

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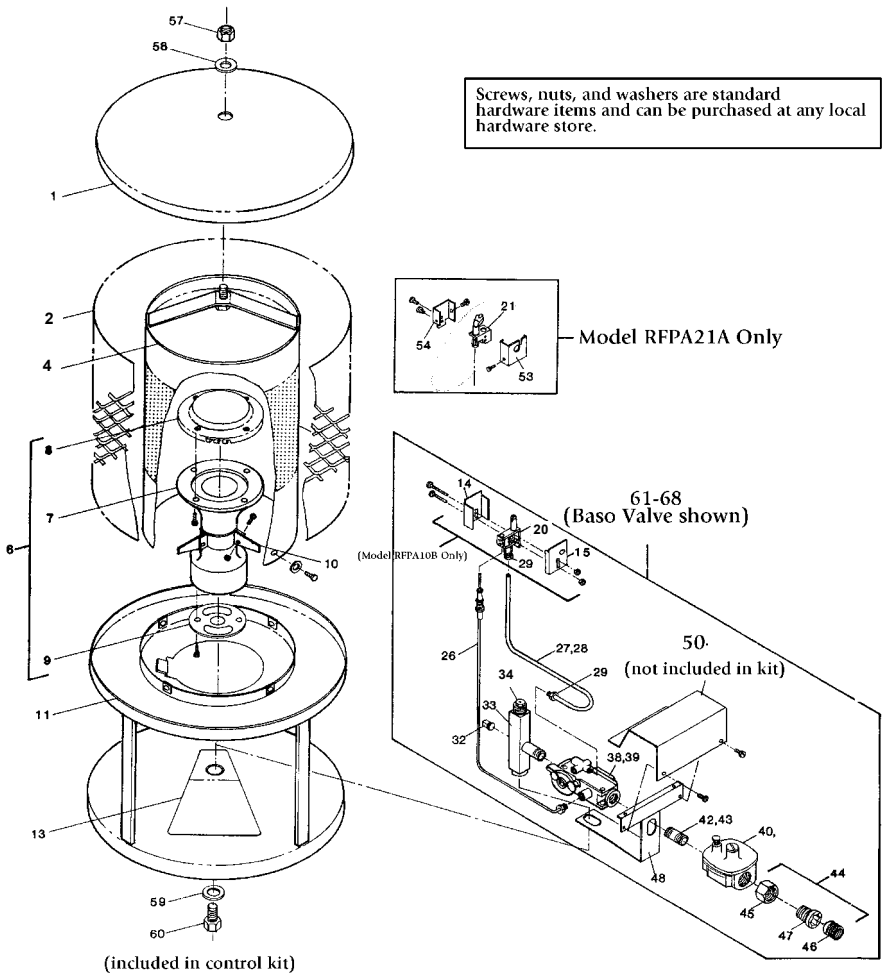
Space Ray Propane or Natural Gas Radiant Heater

Model Numbers
RFPA10B
RFPA21A


Screws, nuts, and washers are standard hardware items and can be purchased at any local hardware store.
Model RFPA21A Only
61-68
(Baso Valve shown)
(Model RFPA10B Only)
50.
(not included in kit)
(included in control kit)

Key No.	Part Number	Description
1	0411400	Upper Head
2	0459302	Expanded Metal Guard (short) (RFPA10B)
4	0436202	Heat Exchanger Assembly (short) (RFPA10B)
6	0438000	Main Burner Assembly (complete)
7	4185800	Burner Base
8	4185900	Burner Cap
9	0409401	Shutter Plate - Fixed
10	4058400	Burner Alignment Bracket Assembly
11	0478301	Base Assembly
13	4180600	Warning Plate
14	4179502	Pilot Shield - Outer (RFPA10B)
15	4179501	Pilot Shield - Inner (RFPA10B)
16	0339902	Pilot Burner & Orifice FItting - Nat #J129DDA3223 (RFPA10B-N6,N6C)
21	3033501	Pilot Burner & Orifice Fitting - Nat. #J181EKA7221 (RFPA21A-N6)
26	0340103	Thermocouple (RFPA10B, RFPA21A)
27	0465900	Pilot Tubing - Baso Valve
28	4179900	Pilot Tubing - White-Rodgers valve
29	0352700	Break Away Fitting - Comes w/valve & pilot orifice
32	0333902	Plug - 1/8" (Pressure Tap)
33	4183400	Burner Fitting Assembly
34	0325812	Main Burner Orifice (Nat.) #12 (RFPA10B-N6,N6C)
38	0369500	Gas Valve - Baso #H43BA-5D
40	0330710	Regulator - RV48 (Nat.)
42	0333304	Nipple 1/2 x 1-12
43	0333310	Nipple 1/2 x 3
44	0306800	Union (Complete)
45	0306803	Nut (Union)
46	0306801	Union Half - Female
47	0306802	Union Half - Male

Key No.	Part Number	Description
48	4313600	Manifold Support & Nameplate Bracket
49	4135701	Instruction Manual (not shown)
50	4198800	Nameplate (State Gas Type) (RFPA10B-6)
53	4291801	Pilot Shield - Inner (RFPA21A)
57	0212715	Nut - Hex 1/2-13
58	0212916	Washer - Flat 1/2
59	4184700	Washer - Burner Fitting
60	0224701	Machine screw 1/2-13 x 1
61	4187701	Control Arm Kit - Nat (RFPA10B-N6)

RFPA10B - L6	(4247702)
RFPA10B - L6C	(4247706)
RFPA10B - N6	(4247701)
RFPA10B - N6C	(4114302)
RFPA21A - L6	(4115001)
RFPA21A - N6	(4114901)

CODE REFERENCE
N - Natural Gas L - LP Gas
6 - 100% Gas Shutoff Control - Manually Operated (Baso Valve)
6C - 100% Gas Shutoff Control - Manually Operated (White-Rodgers valve)

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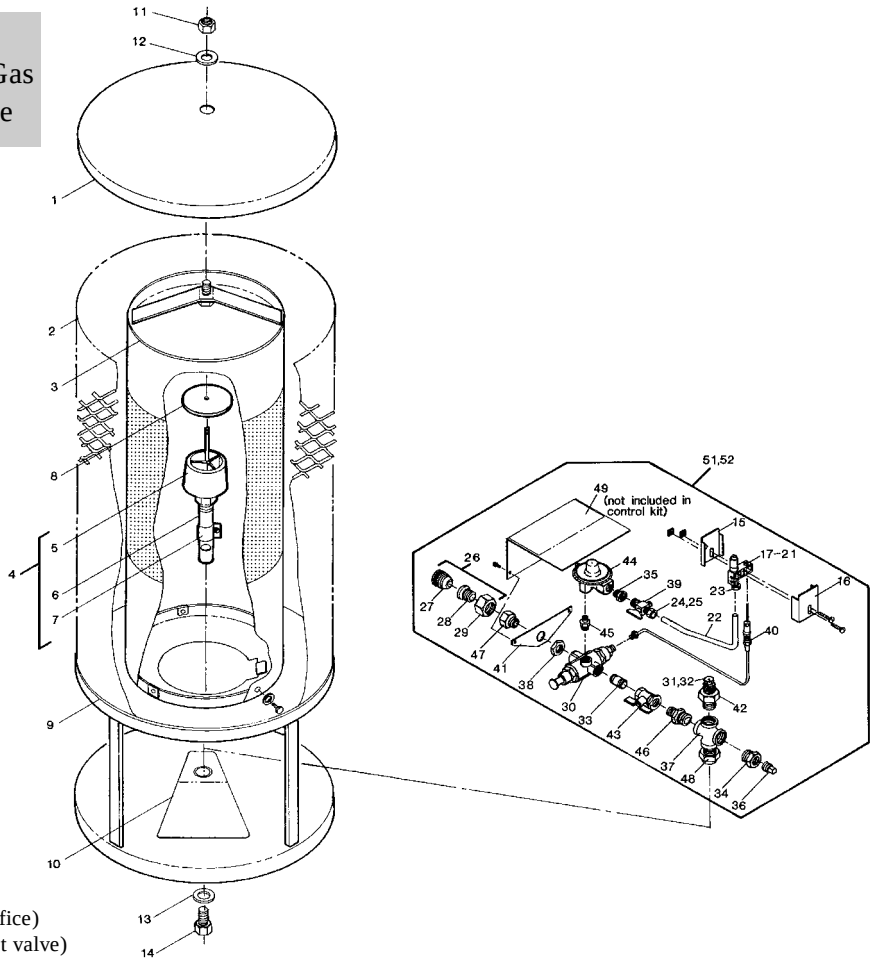
Space-Ray Propane or Natural Gas Radiant Heater

Model Number

4115101 - (RFPA25 - N6A) 250,000 Nat. Gas
4115200 - (RFPA25 - L6) 250,000 Propane



Key No.	Part No.	Description
1	0411400	Upper Head
2	0459303	Expanded Metal Guard
3	0448500	Heat Exchanger Assembly
4	4125800	Burner Assembly (Complete-Incl. 5,6,7)
5	4201100	Burner Top & Bracket Assembly
6	0702200	Burner Tube
7	0430400	Air Shutter
8	4033800	Burner Target
9	0478301	Base Assembly
10	4180601	Warning Plate
11	0212715	Nut, Hex 1/2-13
12	0212916	Washer, Flat 1/2
13	4184700	Washer, Burner Fitting
14	0224701	Machine Screw, 1/2-13 x 1
15	4179501	Pilot Shield - Inner
16	4179502	Pilot Shield - Outer
17	0339902	Pilot Shield & Orifice Fitting Nat #J129DDA3223
18	0339903	Pilot Shield & Orifice Fitting LP #J129DDA4212
19	0334501	Pilot Orifice - Nat (.023") #Y90AA-3223
20	0334502	Pilot Orifice - LP (.012") #Y90AA-4212
21	0343700	Pilot Burner less Orifice #J129DDA
22	4168401	Pilot Tubing
23	0352700	Break Away Fitting (comes w/pilot orifice)
24	0360101	Nut,Compression 1/4" (comes w/Pilot valve)
25	0360001	Sleeve, Compression 1/4"(comes w/Pilot valve)
26	0306800	Union, 1/2 NPT (Complete)
27	0306801	Union Half, 1/2 FPT
28	0306802	Union Half, 1/2 MPT
29	0306803	Union Nut, 1/2" FPT
30	0316600	Pilot Safety Gas Valve #H19LA-1
31	0325833	Main Burner Orifice (Nat.) #33
32	0325842	Main Burner Orifice (LP) #42
33	0333004	Nipple, 3/8 NPT x 1-1/2" Long
34	0333810	Reducing Bushing, 1/2 x 1/4 NPT
35	0333820	Reducing Bushing, 1/4 x 1/8 NPT
36	0333904	Plug, 1/4 NPT (pressure tap)
37	0334008	Cross, 1/2 NPT
38	0334706	Locknut, 3/8 Conduit
39	0338402	Pilot Valve, 1/8 MPT x 1/4" OD Tube
40	0340103	Thermocouple 18" Long #K16BA-18
41	0408800	Bracket, Radiation Shield
42	0409800	Burner/Orifice Fitting
43	3028501	Manual Ball Valve 3/8"
44	3052401	Pilot Regulator #140T
45	3052700	Nipple, Hex Reducing 1/4 MPT x 1/8 MPT
46	3052701	Nipple, Hex Reducing 1/2 MPT x 3/8 MPT
47	3052800	Adapter, Reducing 1/2 FPT x 3/8 MPT
48	4184900	Manifold Holder Stud
49	0450802	Nameplate/Shield Assembly (State Gas Type)
50	4135801	Instruction Manual (Not Shown)
51	4187727	Control Arm Kit - Natural Gas
52	4187728	Control Arm Kit - LP Gas

CODE REFERENCE

N - Natural Gas
L - LP Gas
6A - 100% Gas Shutoff Control - Manually Operated

Screws, nuts & washers are standard hardware items and can be purchased at any local hardware store.

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Heat Wagon/SureFlame Heaters

Always remember to match the model number of your heater with the model number of the individual breakdowns in this section. The breakdowns in this manual refer to the model specifically listed on each individual page. Use a breakdown only if you have the exact model match for your particular heater. If your model number does not appear in the breakdowns, please call one of our technicians for assistance.

If you need technical assistance, feel free to call **Portable Heater Parts at 1-800-362-6951 or e-mail us at techservice@portableheaterparts.com**. Whenever possible, please have your model number and the nature of your problem before you place a call for technical service.

Brand Names Include:
Heat Wagon
Sure Flame

HEATER INDEX

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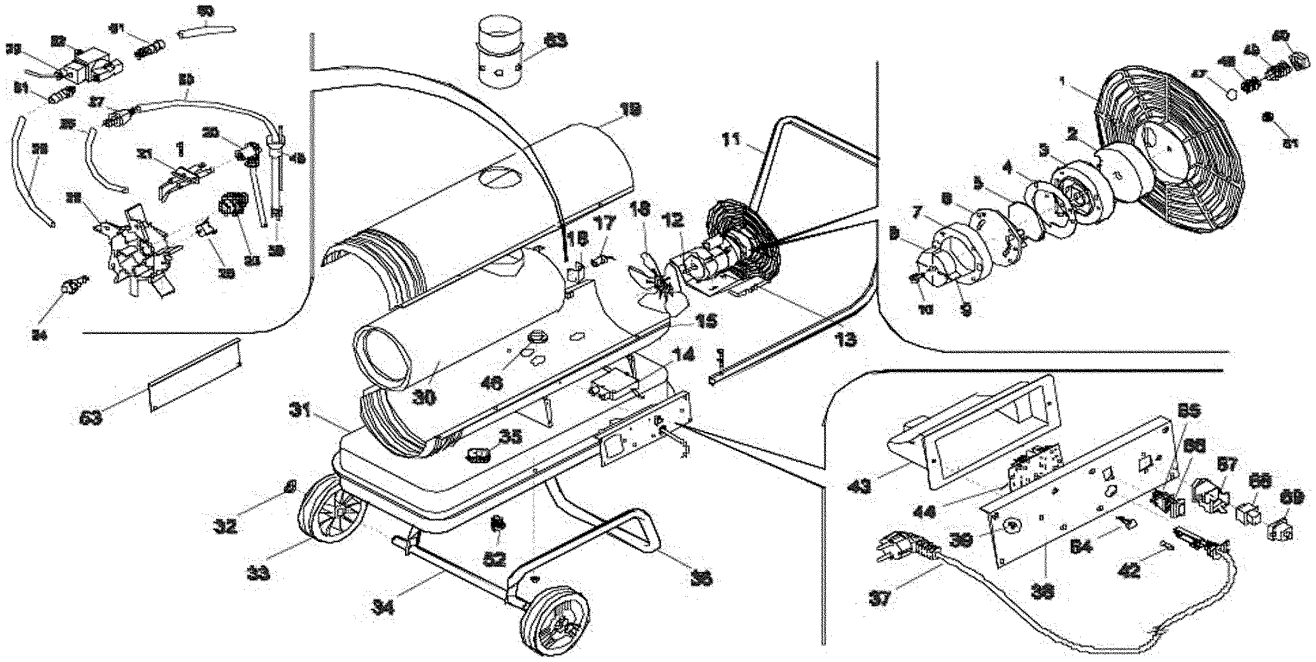
90,000 BTU Heat Wagon Indirect Oil Fired Heater

Model Numbers
LVF90



Key No.	Part No.	Description
1	1006000311	REAR GUARD
2	1086001711	AIR INLET FILTER
3	1094007311	PLATE
4	1002001311	GASKET
5	1086000111	AIR OUTLET FILTER
6	1094007211	COVER
7	1094008211	STATOR RING
8	1099001811	ROTOR
9	1099001411	BLADE
10	1001008311	JOINT
11	MANT#GRY4020	HANDLE
12	1040009411	MOTOR
13	1094006111	MOTOR SUPPORT
14	1033004411	IGNITION TRANSFORMER
15	1094143711	LOWER CASING
16	1094104211	FLAME SENSOR SUPPORT
17	1050000711	FLAME SENSOR
18	1087004611	FAN
19	1094143811	UPPER CASING
20	1039033211	HT CABLE
21	1030001111	IGNITION ELECTRODE
22	1094138011	COMBUSTION HEAD
23	1001017011	NOZZLE HOLDER
24	1088014311	NOZZLE
25	1078000211	HOSE
26	1078001611	HOSE
27	1086001911	OIL FILTER
28	1036001611	SAFETY THERMOSTAT
29	1043002655	CABLE + CONNECTOR
30	CAMERA#GRY025	COMBUSTION CHAMBER
31	SERBGRYP#040STD20	TANK

Key No.	Part No.	Description
32	1022000911	WHEEL RING
33	1004000200	WHEEL
34	ASSALE#GRY4020	AXLE
35	1094004311	FILLING CAP
36	TELAIOT#GRY04020	FRAME
37	CAVAL#USA0180USAP2	POWER CORD
38	CRUSCGRYP#025F20	LEFT SIDE PANEL
39	1016001600	SCREW
42	1035001511	FUSE
43	1001016711	COVER
44	1047004111	CONTROL BOARD
45	1002005711	GASKET
46	1002002100	RUBBER GASKET
47	1023002411	BALL
48	1023004511	SPRING
49	1023002511	SCREW
50	1017002111	NUT
51	1067006911	CAP
52	1067007000DRAIN	CAP
53	CRUSCGRYP#028C20	SIDE RIGHT PANEL
59	1001014711	SUCTION FITTING
60	1078000411	RUBBER HOSE
61	1067005800	HOSE HOLDER
62	1042003811	SOLENOID VALVE
63	1094138733	EXHAUST HOOD
64	1001015680	SPACER
65	1032001900	SWITCH
66	1002002755	SWITCH COVER
67	1043000600	SOCKET CASING
68	1043000400	SOCKET
69	1052001800	CAP

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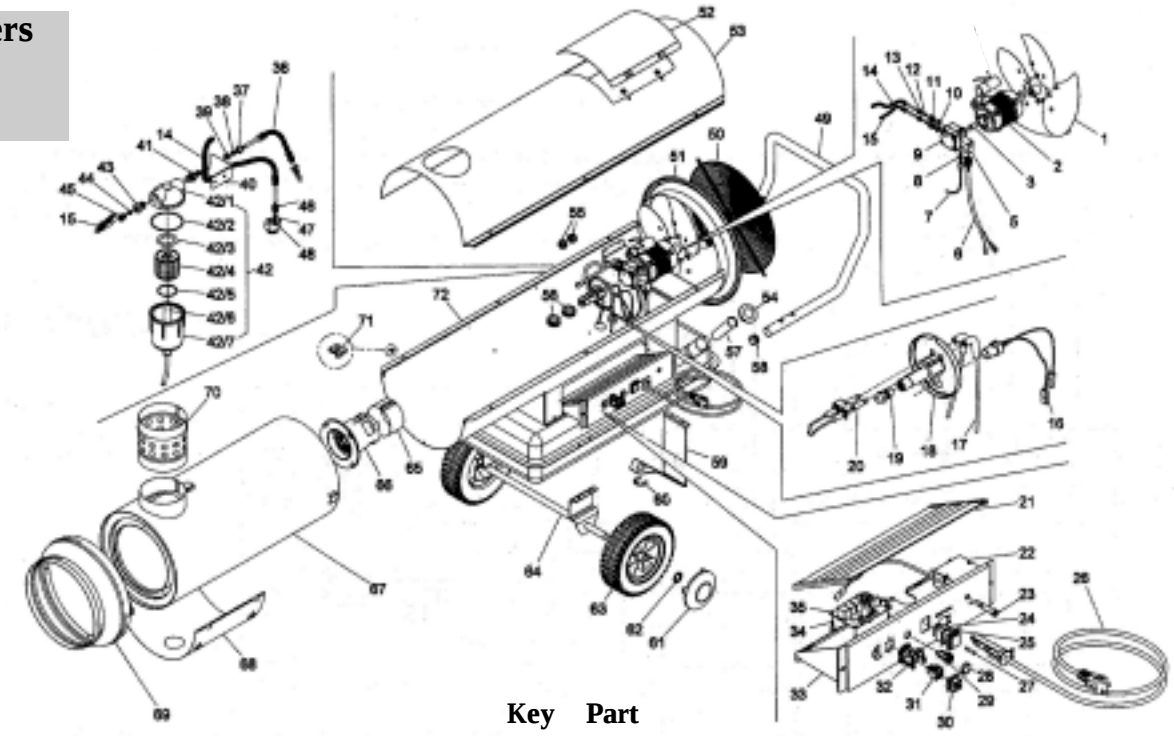
180,000 BTU Heat Wagon Indirect Oil Fired Heater

Model Numbers
HVF180
(2004)



Key No.	Part No.	Description
1	1087008133	Fan
2	1040012900	Motor
3	1001001300	Joint
5	1089007200	Coil
6	1043004500	Cable & Connector
7	1076004300	Microhose
8	1067004100	Fitting
9	1089007100	Pump
10	1018002900	Washer
11	1066001300	Fitting
12	1067009100	Ogive
13	1066001600	Fitting
14	1078000600	Backflow Hose
15	1078000100	Inflow Hose
16	1050000832	Flame Sensor
17	1039037433	HT Cable
18	1094135533	Burner Head
19	1088012100	Nozzle
20	1030002100	Electrode
21	1001017500	Cover
22	1033001333	Transformer
23	1032005500	Reset Pushbutton
24	1032001700	On/Off Switch
25	1002002600	Cap
26	CAVAL#USA0400USAP2	Power Supply Cable
27	1035001800	Fuse
28	1002002855	Cap
29	1032005500	Reset Pushbutton
30	1052001800	Socket Cap
31	1043000400	Socket Body
32	1043000600	Socket Casing
33	1001017200	Control Panel
34	1001015680	Spacer
35	1047004600	Burner Control
36	1078000300	Suction Hose
37	1066001700	Fitting
38	1067009100	Ogive
39	1017002800	Nut
40	1094134900	Filter Bracket

Key No.	Part No.	Description
41	1066001500	Fitting
42	1086000800	Oil Filter
42/1	1135000500	Cover
42/2	1002004200	O-Ring
42/3	1002005100	Gasket
42/4	1086002800	Cartridge
42/5	1002005200	O-Ring
42/6	1052004900	Heating Element
42/7	1135000600	Filter Glass
43	1066001300	Fitting
44	1067009100	Ogive
45	1066001600	Fitting
46	1066001600	Fitting
47	1067009100	Ogive
48	1066001200	Suction Fitting
49	1095011800	Handle
50	1090007533	Guard
51	CONVGEN#MIR05536	Air Inlet
52	PORTISP#TOMM436	Inspection Cover
53	COPGEN#MIR05536	Upper Shell
54	1005000100	Tank Cap
55	1002002000	Gasket
56	1002002100	Gasket
57	1086001000	Filling Filter
58	1005000900	Handle Cap
59	1094046500	Tank Support
60	1023001500	Spring
61	1005002000	Wheel Cap
62	1022000300	Seeger Ring
63	1004001300	Wheel
64	1094134100	Axle
65	1094135733	Air Lock
66	1095011233	Chamber Inlet
67	CAMGEN#MIR055	Combustion Chamer
68	PROCAMGEN#MIR5H	Chamber Shield
69	CONOMIR#055A36	Air Outlet
70	1094138733	Flue Collar
71	1017002200	Fixing Clip
72	CRPGEN#MIR05536	Lower Shell
*	1036004400	Safety Thermostat

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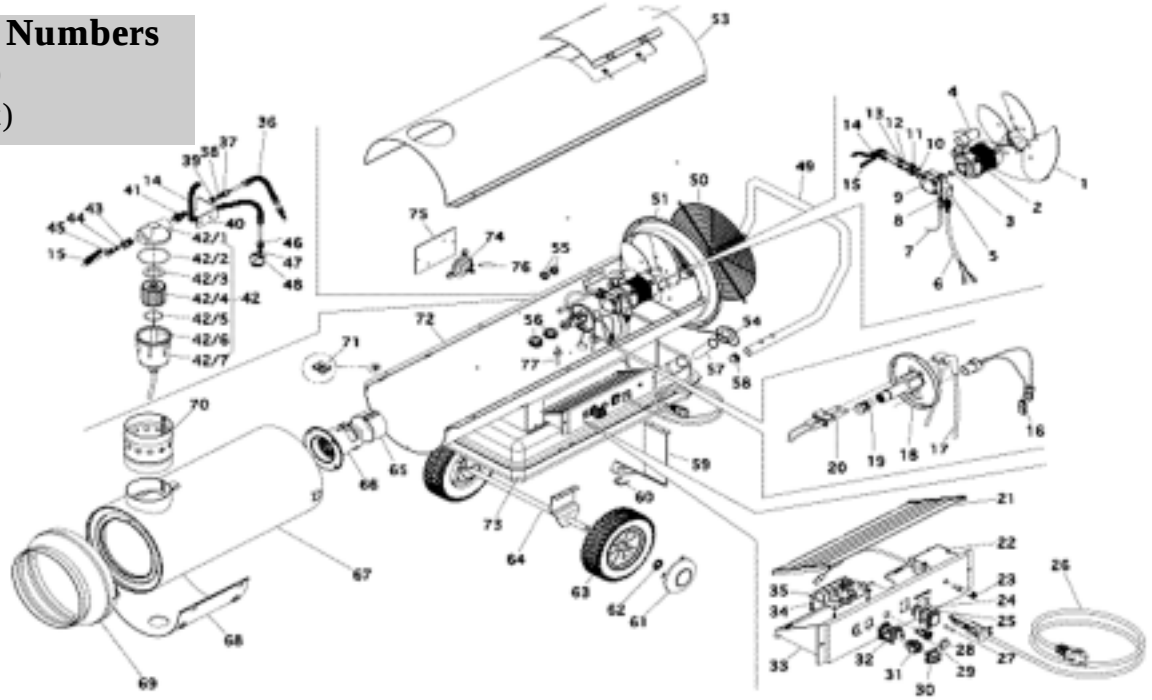
180,000 BTU Heat Wagon Indirect Oil Fired Heater

Model Numbers
HVF180
(Present)



Key No.	Part No.	Description
1	1087008133	FAN
2	1040012900	MOTOR
3	1001001300	JOINT
5	1089007200	COIL
6	1043004500	CABLE + CONNECTOR
7	1076004300	MICROHOSE
8	1067004100	FITTING
9	1089007100	PUMP
10	1018002900	WASHER
11	1066001300	FITTING
12	1067009100	OGIVE
13	1066001600	FITTING
14	1078000600	BACKFLOW HOSE
15	1078000100	INFLOW HOSE
16	1050001000	FLAME SENSOR
17	1039043600	HT CABLE
18	1094135533	BURNER HEAD
19	1088012100	NOZZLE
20	1030002100	ELECTRODE
21	1001017700	COVER
22	1033004600	TRANSFORMER
23	1032005500	LAMP
24	1032001700	ON/OFF SWITCH
25	1002002600	CAP
26	CAVAL#US10400USAP2	POWER SUPPLY CABLE
27	1035001800	FUSE
28	1002002855	CAP
29	1032005500	RESET PUSHBUTTON
30	1052001800	SOCKET CAP
31	1043000400	SOCKET BODY
32	1043000600	SOCKET CASING
33	1001017200	CONTROL PANEL
34	1001015680	SPACER
35	1047004600	BURNER CONTROL
36	1078000300	SUCTION HOSE
37	1066001700	FITTING
38	1067009100	OGIVE
39	1017002800	NUT
40	1094134900	FILTER BRACKET
41	1066001500	FITTING
42	1086000800	OIL FILTER

Key No.	Part No.	Description
42/1	1135000500	COVER
42/2	1002004200	O-RING
42/3	1002005100	GASKET
42/4	1086002800	CARTRIDGE
42/5	1002005200	O-RING
42/6	1052004900	HEATING ELEMENT
42/7	1135000600	FILTER GLASS
43	1066001300	FITTING
44	1067009100	OGIVE
45	1066001600	FITTING
46	1066001600	FITTING
47	1067009100	OGIVE
48	1066001200	SUCTION FITTING
49	1095011800	HANDLE
50	1090007533	GUARD
51	CONVGEN#MIR05536	AIR INLET
52	PORTISP#TOMM436	INSPECTION COVER
53	COPGEN#MIR05536	UPPER SHELL
54	1005000100	TANK CAP
55	1002002000	GASKET
56	1002002100	GASKET
57	1086001000	FILLING FILTER
58	1005000900	HANDLE CAP
59	1094046500	TANK SUPPORT
60	1023001500	SPRING
61	1005002000	WHEEL CAP
62	1022000300	SEEGER RING
63	1004001300	WHEEL
64	1094134100	AXLE
65	1094135733	AIR LOCK
66	1095011233	CHAMBER INLET
67	CAMGEN#MIR055	COMBUSTION CHAMBER
68	PROCAMGEN#MIR5H	CHAMBER SHIELD
69	CONOMIR#055A36	AIR OUTLET
70	1094138733	FLUE COLLAR
71	1017002200	FIXING CLIP
72	CRPGEN#MIR18036	LOWER SHELL
73	SERBGEN#MU20	TANK
74	1046001500	AIR PRESSURE SWITCH
75	1080002600	AIR HOSE
76	1094171300	PLATE
77	1046001036	HOSE FITTING

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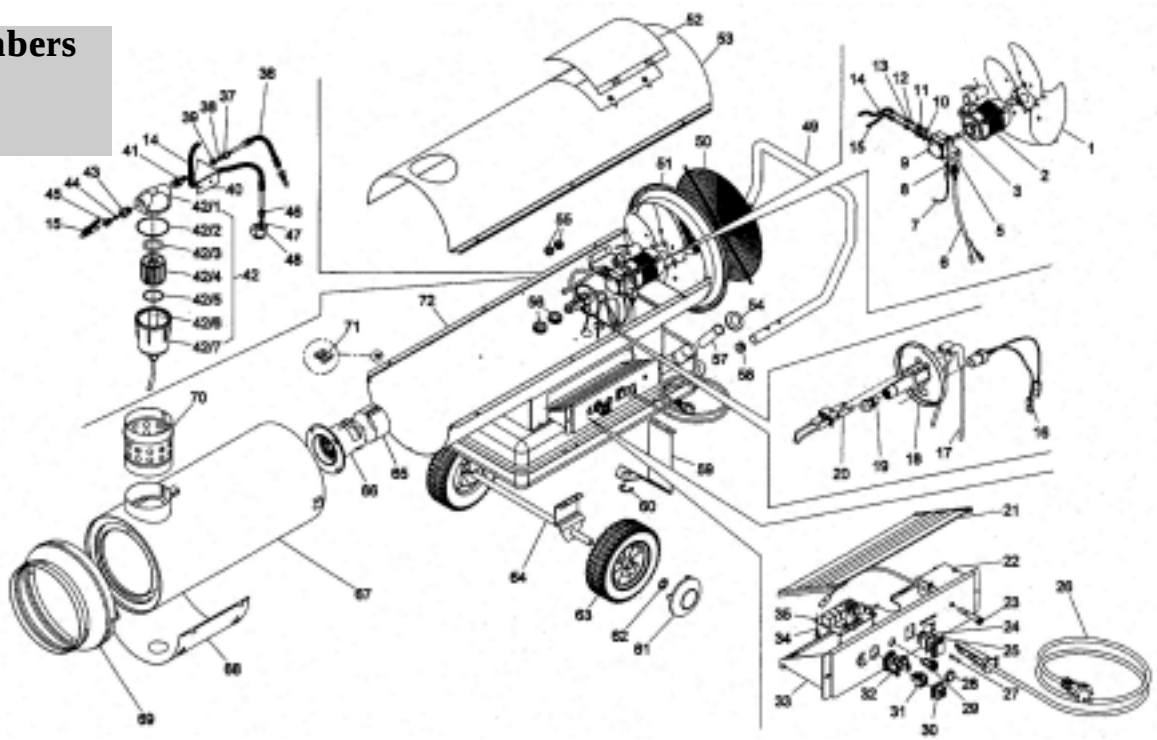
300,000 BTU Heat Wagon Indirect Oil Fired Heater

Model Numbers
HVF300
(2004)



Key No.	Part No.	Description
1	1087008233	Fan
2	1040013000	Motor
3	1001017400	Joint
5	1089007200	Coil
6	1043004500	Cable & Connector
7	1076004300	Microhose
8	1067004100	Fitting
9	1089006100	Pump
10	1018002900	Washer
11	1066001300	Fitting
12	1067009100	Ogive
13	1066001600	Fitting
14	1078000500	Backflow Hose
15	1078000100	Inflow Hose
16	1050000832	Flame Sensor
17	1039037433	HT Cable
18	1094135633	Burner Head
19	1088014000	Nozzle
20	1030002100	Electrode
21	COPGEN#MIR08536	Cover
22	1033001333	Transformer
23	1032005500	Reset Pushbutton
24	1032001700	On/Off Switch
25	1002002600	Cap
26	CAVAL#USA0400USAP2	Power Supply Cable
27	1035000800	Fuse
28	1002002855	Cap
29	1032005500	Reset Pushbutton
30	1052001800	Socket Cap
31	1043000400	Socket Body
32	1043000600	Socket Casing
33	1001017200	Control Panel
34	1001015680	Spacer
35	1047004600	Burner Control
36	1078001000	Suction Hose
37	1066001700	Fitting
38	1067009100	Ogive
39	1017002800	Nut
40	1094134900	Filter Bracket

Key No.	Part No.	Description
41	1066001500	Fitting
42	1086000800	Oil Filter
42/1	1135000500	Cover
42/2	1002004200	O-Ring
42/3	1002005100	Gasket
42/4	1086002800	Cartridge
42/5	1002005200	O-Ring
42/6	1052004900	Heating Element
42/7	1135000600	Filter Glass
43	1066001300	Fitting
44	1067009100	Ogive
45	1066001600	Fitting
46	1066001600	Fitting
47	1067009100	Ogive
48	1066001200	Suction Fitting
49	1095011700	Handle
50	1090007633	Guard
51	CONVGEN#MIR08536	Air Inlet
52	PORTISP#TOMG436	Inspection Cover
53	COPGEN#MIR08536	Upper Shell
54	1005000100	Tank Cap
55	1002002000	Gasket
56	1002002100	Gasket
57	1086001000	Filling Filter
58	1005000900	Handle Cap
59	1094141600	Tank Support
60	1023001500	Spring
61	1005002000	Wheel Cap
62	1022000300	Seeger Ring
63	1004001300	Wheel
64	1094141500	Axle
65	1094135733	Air Lock
66	1095011333	Chamber Inlet
67	CAMGEN#MIR085	Combustion Chamer
68	PROCAMGEN#MIR8H	Chamber Shield
69	CONOMIR#085A36	Air Outlet
70	1094138733	Flue Collar
71	1017002200	Fixing Clip
72	CRPGEN#MIR08536	Lower Shell
*	1036004400	Safety Thermostat

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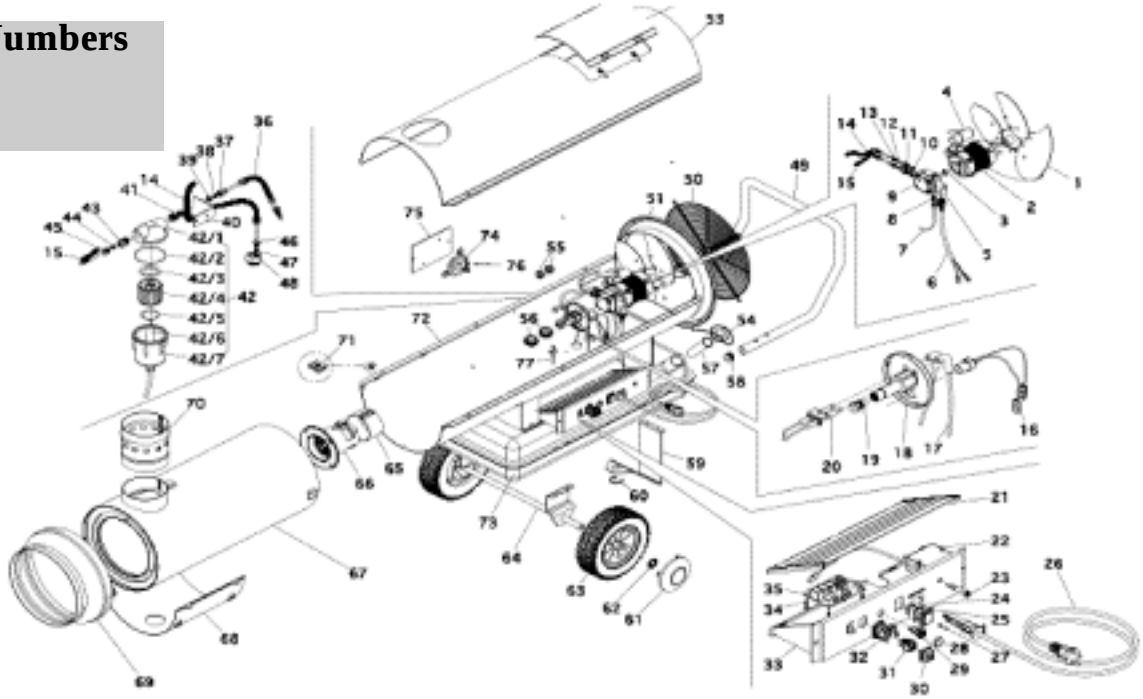
300,000 BTU Heat Wagon Indirect Oil Fired Heater

Model Numbers
HVF300
(Present)



Key No.	Part No.	Description
1	1087008233	FAN
2	1040013000	MOTOR
3	1001017400	JOINT
5	1089007200	COIL
6	1043004500	CABLE + CONNECTOR
7	1076004300	MICROHOSE
8	1067004100	FITTING
9	1089006100	PUMP
10	1018002900	WASHER
11	1066001300	FITTING
12	1067009100	OGIVE
13	1066001600	FITTING
14	1078000500	BACKFLOW HOSE
15	1078000100	INFLOW HOSE
16	1050001000	FLAME SENSOR
17	1039043600	HT CABLE
18	1094135633	BURNER HEAD
19	1088014000	NOZZLE
20	1030002100	ELECTRODE
21	1001017700	COVER
22	1033004600	TRANSFORMER
23	1032005500	LAMP
24	1032001700	ON/OFF SWITCH
25	1002002600	CAP
26	CAVAL#US10400USAP2	POWER SUPPLY CABLE
27	1035000800	FUSE
28	1002002855	CAP
29	1032005500	RESET PUSHBUTTON
30	1052001800	SOCKET CAP
31	1043000400	SOCKET BODY
32	1043000600	SOCKET CASING
33	1001017200	CONTROL PANEL
34	1001015680	SPACER
35	1047004600	BURNER CONTROL
36	1078001000	SUCTION HOSE
37	1066001700	FITTING
38	1067009100	OGIVE
39	1017002800	NUT
40	1094134900	FILTER BRACKET
41	1066001500	FITTING
42	1086000800	OIL FILTER
42/1	1135000500	COVER
42/2	1002004200	O-RING
42/3	1002005100	GASKET
42/4	1086002800	CARTRIDGE
42/5	1002005200	O-RING
42/6	1052004900	HEATING ELEMENT
42/7	1135000600	FILTER GLASS
43	1066001300	FITTING
44	1067009100	OGIVE
45	1066001600	FITTING
46	1066001600	FITTING
47	1067009100	OGIVE
48	1066001200	SUCTION FITTING
49	1095011700	HANDLE
50	1090007633	GUARD
51	CONVGEN#MIR08536	AIR INLET
52	PORTISP#TOMG436	INSPECTION COVER
53	COPGEN#MIR08536	UPPER SHELL
54	1005000100	TANK CAP
55	1002002000	GASKET
56	1002002100	GASKET
57	1086001000	FILLING FILTER
58	1005000900	HANDLE CAP
59	1094141600	TANK SUPPORT
60	1023001500	SPRING
61	1005002000	WHEEL CAP
62	1022000300	SEEGER RING
63	1004001300	WHEEL
64	1094141500	AXLE
65	1094135733	AIR LOCK
66	1095011333	CHAMBER INLET
67	CAMGEN#MIR085	COMBUSTION CHAMBER
68	PROCAMGEN#MIR8H	CHAMBER SHIELD
69	CONOMIR#085A36	AIR OUTLET
70	1094138733	FLUE COLLAR
71	1017002200	FIXING CLIP
72	CRPGEN#MIR08536	LOWER SHELL
73	SERBGEN#G420	TANK
74	1046001500	AIR PRESSURE SWITCH
75	1080002600	AIR HOSE
76	1094171300	PLATE
77	1046001036	HOSE FITTING

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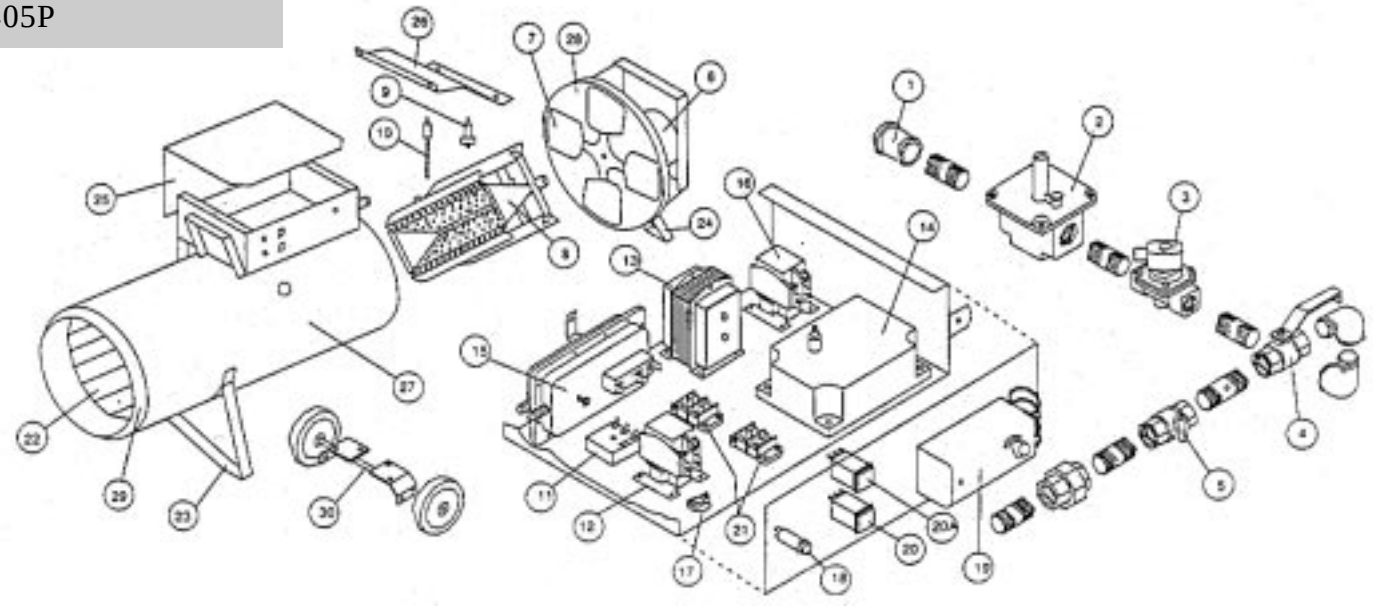
Propane or Natural Gas Sureflame Forced Air Heater

Model Number
S405P



Key No.	Part No.	Description
1	40SV01P	Strainer (S400-80)
2	2524P	Low Pressure Regulator
3	4514P	Solenoid Shut Off Valve 24V
4	40SV04P	Gas Selector Valve (S400-73)
5	2538P	Manual Shut Off Valve 3/4" valve
6	2430P	Motor 1/4 H.P.
7	2420P	Fan Blade
8	40SB26P	Burner
9	2142P	Spark Plug
10	40SB28P	Flame Rod
11	7465P	24VAC 5-Second Delay-ON-Break Timer
12	4519P	Control Relay 24V
13	4510P	Transformer 24V
14	5943P	Direct Spark Ignition Control
15	5124P	Air Switch
16	4519P	Motor Relay 24V
17	2446P	Hi Limit Thermoswitch
18	4518P	Indicator Light 24V
19	2453P	Thermostat
20	3337RP	OFF Switch (Red)

Key No.	Part No.	Description
20A	3337GP	On Switch (Green)
21	5768P	Terminal Block
22	S400-2P	Heat Shield
23	S400-57P	Front Leg Assembly
24	S400-47P	Rear Leg Assembly (less motor mount & screen)
25	4517P	Control Box Lid
26	SC400-38P	Valve Train Cover
27	S400-53P	Heater Body Includes 22, 23 & 29
28	SFP3859P	Motor Mount (with screen & rear legs)
29	S400-3P	Nose Cone
30	SWK1P	Wheel Kit (Optional)
31	40SV06P	Regulator (Optional)

Parts Available - Not Shown

7510P	3/4" x 10' Gas Hose with swivel (Optional)
HC1020P	6' Powercord (14 GA)
HC1005P	Ignition wire assy. w/fittings

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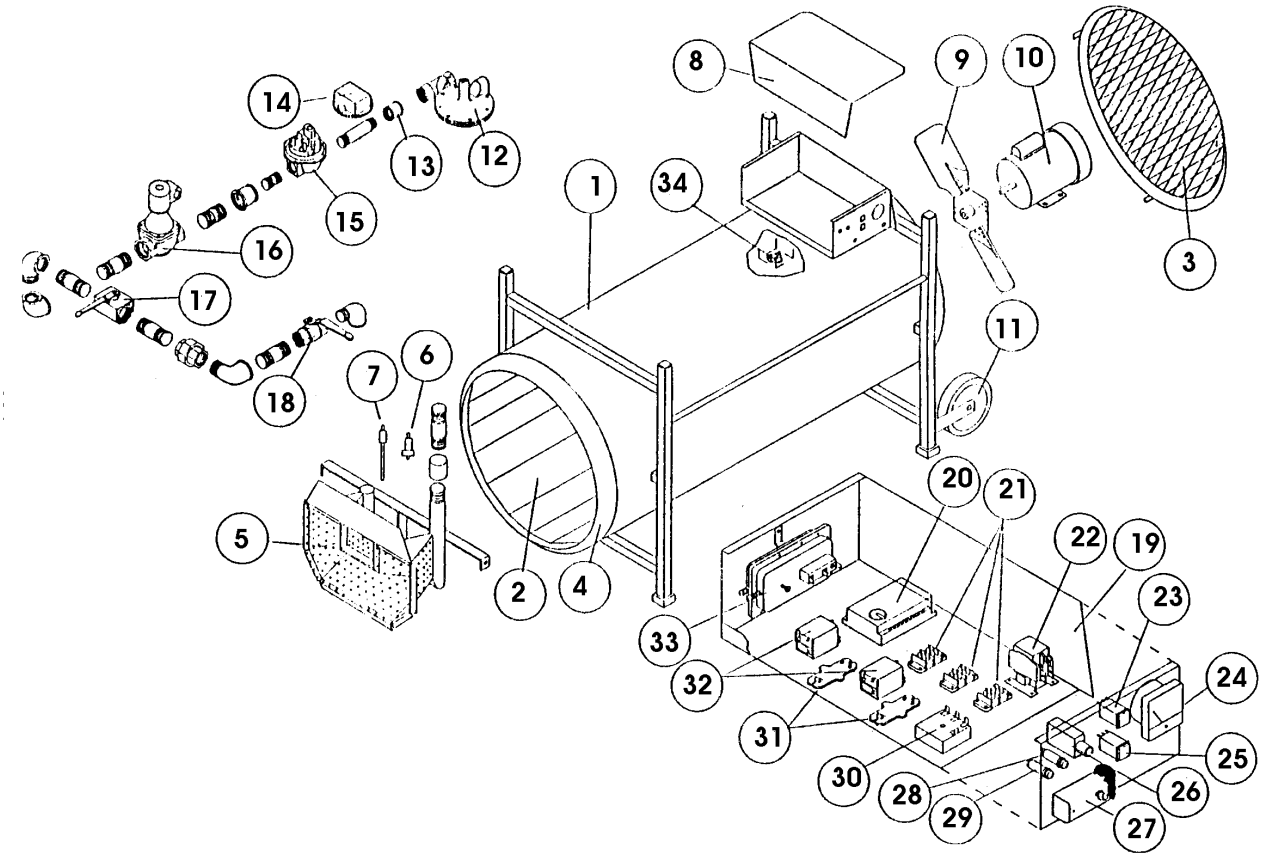
Sureflame Propane or Natural Gas Forced Air Heater

Model Number
S1505P



Key No.	Part No.	Description
1	S1505-55P	Heater Body Includes:2,4,5
	S1505-56P	Heater Body Includes:2, 4
2	SL11B-90P	Heat Shield
3	SL11B-53P	Screen
4	SL11B-13P	Nose Cone
5	BV85-50P	Burner
6	2143P	Spark Plug
7	SL11B-86P	Flame Rod
8	SL11B-35P	Control Box Cover
9	2423P	24” Fan Blade
10	2432P	1 HP Electric Motor
11	6119P	8” Semi Pneumatic Wheel
12	2526P	Regulator (Optional)
13	S1500-83P	1.25” Strainer
14	4509P	Gas Pressure Switch
15	4490P	1.25” 2 Stage Regulator Valve
16	2537P	1.5” Solenoid Valve
17	S1505-81P	1.5” Gas Selector Valve
18	2539P	1.5” Manual Shut-Off valve
19	SL11B-58P	Control Box
20	7462P	Ignition Control Module

Key No.	Part No.	Description
21	5768P	Terminal Block (3)
22	2436P	Motor Starting Relay
23	3337GP	ON Switch (Green)
24	5989P	Voltmeter
25	3337RP	OFF Switch (Red)
26	HC1002P	Circuit Breaker for item 20
27	2453P	Thermostat
28	2506P	Red Light
29	2505P	White Light
30	5988P	10-Second delay ON break timer
31	6440P	Relay Clip
32	4512P	Control Relay with clip
33	5355P	Airswitch (0.5” W.C.)
34	2446P	Hi Limit Thermoswitch

PARTS AVAILABLE, NOT SHOWN

12510P	1-1/4” x 10’ Gas Hose with swivel (optional)
HC1005P	Ignition wire assy. w/fittings
HC1006P	Flame detection wire to limit switch

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Miscellaneous Service Equip. & Supplies

This section focuses on the tools and supplies that are needed in order to service oil and gas fired heaters. Hopefully, this portion of the book will give you a better understanding of the common supplies you will need to stock in your repair shop for expedient repair services.

Of course, you can call one of our technicians at **PHP at 800-362-6951 ext. 2** for advice on servicing your heaters and getting set up to repair your customers heaters.

Repair shops can never have too many manuals and gauges on hand. They will help you in servicing your heaters on a more accurate basis. The CD Rom's can assist you in training employees, especially your new mechanics

Gauges
Hoses
Thermostat Parts
Tools
Manuals
CD Roms

MISCELLANEOUS INDEX

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Ignitor / Electrode Wire Terminals

Solderless - Reusable

These are the most common types of terminals used on portable oil and gas heaters.

#55211

90˚ Electrode Terminal
Part No. 55211
Package of 5

90˚ Non-Insulated Terminal
Part No. 55321
Package of 5

#55321

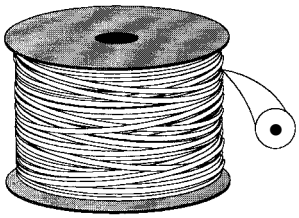
#55231

Straight Insulated Terminal
Part No. 55231
Package of 5

Straight Non-Insulated Terminal
Part No. 55221
Package of 5

Straight Non-Insulated Base Stud
Part No. 55021
Package of 5

Electrode leads for 6000V to 15000V transformers can be made to order, call for details.



Belden Type GTO-15 Ignition Wire

15,000 Volt Rated; UL Listed

#41648
10' Ignition Wire

#41650
25' Ignition Wire

Standard Nylon Cable Ties

Cat. No.	Qty Per Bag	Minimum Tensile Strength	Overall Length	Color
33NCT4	25	18 lbs.	4"	Clear
CV200S	100	50 lbs.	7”	Clear
CV292	100	50 lbs.	11”	Clear
CV432	100	50 lbs.	14”	Clear
33NCT18	50	50 lbs.	18”	Clear

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Nozzles

Desa High Pressure

Part#	GPH x Degree	Model#
M3292	.75 x 80˚A	Old B100's
M4792	.90 x 80˚B	B125
M9108	1.00 x 90˚A	B150, B155, F155
M27828	1.40 x 70˚A	BV250
1000854	1.50 x 60˚	H231
1001347-5	1.50 x 80˚	B240
M18876	1.75 x 70˚A	B220
M4857	1.75 x 80˚A	B250
M51070-01	2.00 x 70˚A	BV400/C
M50112	2.50 x 70˚A	B350's
M18303	2.75 x 70˚	BV400CA
1000489-4	3.00 x 60˚	B400
M14969	3.50 x 70˚A	B500's
M30765	4.00 x 80˚A	B600's

Stone High Pressure

46291	.65 x 80˚B	SG100, SG120
46238	.85 x 80˚B	SG150, SG160
46216	1.50 x 80˚B	SG500 (1974-1977)
46215	2.00 x 80˚B	SG300 (pre 1979)
46215	2.00 x 80˚B	SG500 (pre 1976)
46294	3.25 x 80˚B	SG500 (1977-on)

Kelly High Pressure

32206	.65 x 80˚B	90KSHS
32233	.85 x 80˚B	120KSHS
30266	1.20 x 80˚B	175KSHS
32014	2.25 x 70˚B	300KSHS
32101	3.00 x 80˚B	450KSHS

Toro High Pressure

Part #	GPH x Degree	Model#
154613	.50 x 90˚A	
154466	.60 x 60˚W	CH85, Lil Champ (+)
154615	.75 x 60˚B	CH100 Air Scoop
154608	.75 x 90˚B	CH100 Inline
154610	.85 x 60˚B	CH120 (pre-1977) Champ Ven-Tec
154389	.85 x 80˚B	CH120 Air Scoop VAL 6
154612	1.00 x 90˚A	CH150 Inline
154611	1.10 x 60˚B	CH155 (pre-1978)
154609	1.10 x 70˚B	CPH160 Inline
154387	1.10 x 80˚B	CH155's
154614	1.10 x 90˚B	CH155's with high speed burners
1.35 x 60	1.35 x 60˚	CH200/C CH210 Air Scoop
154607	1.35x 70˚B	
1000854	1.50 x 60˚	CH210 Air Scoops
154388	1.65 x 60˚B	CH230 (pre-1977)
154840	1.65 x 70˚B	CH230
154744	1.65 x 80˚B	CH230
147377	2.00 x 60˚B	CH320's
147531	4.50 x 80˚B	CH650's

Aeroil High Pressure

30266	1.20 x 80˚B	HE-S-163
30279	4.50 x 80˚B	651TS

Universal High Pressure

M50112	2.50 x 70˚A	K350

GPH - Gallons Per Hour
* The SG500 used dual nozzles at that time

Replacing the nozzle should be part of every high pressure oil tune up!

Other nozzles in stock, call for availability.

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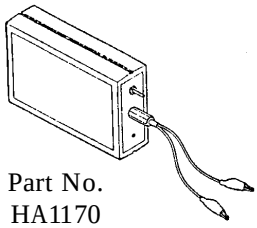
Heater Service Equipment



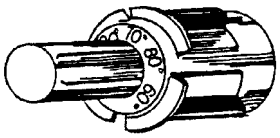
Part No.
HA1170

Master Safety Control/Photocell Tester Part No. HA1170

Portable battery operated
(9V battery not included, available as our part no. HD-9V).

Check all low pressure safety controls and low pressure photo cells for proper operation.

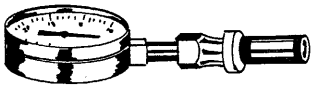
A new tool that is a must for all Portable Heater servicemen, especially for the new HSI heaters. (HSI ignition controls, photocells and glowbars)



Electrode Setting Gauge Part No. 40445

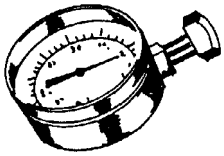
Just slide over nozzle and set electrode.

Works great on Wayne Burners and Champion, Century, Porta Heat, and Guardian Heaters.



Low Pressure Gauge 0-15PSI Part No. HA1180

For Oil Fired Heaters. Test gauge is used when adjusting the pump pressure on low pressure oil fired heaters. A must for use on HSI heaters!



High Pressure Gauge 0-160 PSI Part No. G14494

For Oil Fired Heaters. This test gauge is used to set pump pressure on oil heaters equipped with a high pressure pump (100+ PSI).

Liquid Filled Low Pressure Gauge Part No. 559L-153438

For Oil Fired Heaters. Mounting is on back of gauge instead of bottom of gauge. Most accurate and longest lasting gauge available today! (0-15 PSI)

Low Pressure Oil Fired Service Manual

We have developed our own 160 page service manual that covers all three manufacturers of low pressure oil fired heaters; Desa, Toro, Scheu.

Part No. SM70106

Essential Tool Kit For Repair Shop Part No. RS100

Kit Includes
- HA1170-Safety control tester
- HA1180-Low pressure gauge
- 40445-Electrode setting gauge
- 21T-Technical service catalog

Heater Service CD Roms

Part #CDTECH

Part #CDTS

Part #CD70101

Part #CDGF

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Wick Heater Accessories

Kerosene Wick Sales Ideas for Independent Dealers

AT PHP we sell wicks from Cans Unlimited. Cans offers the most attractively packaged wicks, and they are the most thoroughly tested.

Their English laboratory maintains over 200 different heater models to insure that the wicks fit perfectly and burn at maximum BTU outputs using American fuel.

Some of this year's production lot was tested in 20 different heaters in June 1995. The average percentage above the heaters rated BTU output was 9%. This is very important for customer satisfaction because a heater with a new wick should give the proper BTU output on the low setting. As a wick builds up tar, it must be turned up a little higher to maintain normal combustion. When the heater is turned as high as possible to burn normally, it is time to dry burn. Dry burning cleans the tar from the top of the wick. This lowest setting is used again for normal burning as the cycle starts over.

This is great advice for your customer, but he needs to buy your superior quality wick to take advantage of it. There are many cheap generic wicks which cannot provide the proper combustion on the lower settings.

Some customers want to know if graphite coated fiberglass will accumulate less tar than white fiberglass. One factory that made that claim conducted a test using 80% kerosene and 20% diesel. After 15 1/2 hours the black top had 1,051 milligrams of tar and the white top had 1,651 milligrams. Besides proving nothing about using 100% kerosene, the test may really show that fuel transference to the top of the wick was better with the white top. The white top averaged 9,074 BTU; the black top was 8,840 BTU. Not bad for a dirtier wick.

ACCESORIES INDEX

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Batteries

Ray-O-Vac Alkaline Batteries

-sold by pkg only

Part#	Description	Ctn. Qty.
AL-C	Size C, 6 pack	12 pkgs.
AL-D	Size D, 6 pack	12 pkgs.
AL-AA	Size AA, 8 pack	12 pkgs.
AL-AAA	Size AAA, 8 pack	12 pkgs.
AL-9V	Size 9 volt, 6 pack	12 pkgs.

Ray-O-Vac Heavy-Duty Batteries

-sold by pkg. only

Part#	Description	Ctn Qty.
HD-D	Size D, 6 per pack	12 pkgs.
HD-AA	Size AA, 8 per pack	12 pkgs.

PHP
accepts

VISA MasterCard DISCOVER AMERICAN EXPRESS

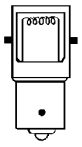
paybycheck
Secure. Accurate. Reliable.

No Extra Fee

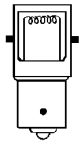
Wick Ignitors

Part# **Models Ignitor Fits**

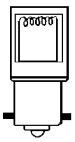
P10A Most popular plug fits Aladdin, Corona, Kero Sun, etc.



P20A For heater you must pull a knob to light. Fits Sanyo 30, 41, 42, 300, 420, 510 Yuasa J10, 40, 50 etc.



P30A Fits Crestline, Noble Warm Knight, Sanyo 28H, 240, 280, Hamai 24, Turco, Yuasa J5, J20, J45, J46

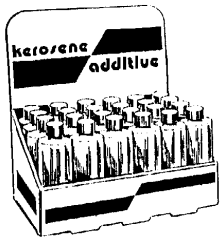


Please consult your manual or the PMI to make sure you get the correct ignitor.

Scented Kerosene Additive

A high quality kerosene treatment. Will help eliminate water and reduce odor! There are 24, 8 oz bottles in a case.

Six each of the following:
A09P - Pine
A09H- Honeysuckle
A09HB - Holly Berry
A09R - Rose



Individual bottles are available for sale.

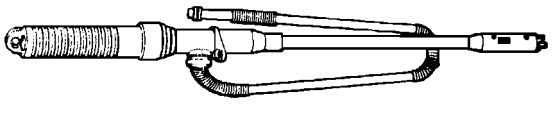
One bottle treats 80 gallons.
For use in wick heaters only.

Mica Windows

#58 - Universal - Can be cut to fit all wick heaters

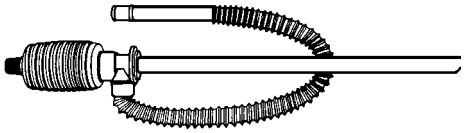
Siphon Pumps

Battery Operated Pump



Part #A60 Battery Operated
Requires 2 “D” cell batteries, not included
AL-D - 6 pack “D” cell batteries

Manual Siphon Pumps



Part #SI60 Individual Bag
Part #A40 12 Pack

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Kerosene Heater Wick Selection Chart Listed By Heater

Wick Part #	Make/Model	Igniter#
	ALADDIN	
6	B-131 Temp-Rite 8 (SW1820)	P10A
7	B-231 Temp-Rite 95	P10A
7	B-331 Temp-Rite 11	P10A
23	B-431 Temp-Rite 15	P10A
23	B-531 Temp-Rite 16 (SW5720)	P10A
23	B-631 Temp-Rite 20	P10A
1A	C-381U Temp-Rite 9	P10A
20	C-581 U Equator	P10A
19	J-175 Silver WIng	P10A
7B	J-180 Pet (PN1020)	P10A
37	J-280 Blue Flame (Japan)	P10A
6A	J-380 Young II (YW3020)	P10A
7	J-480 Happy II	P10A
7	P-32001 (HN 4020 B)	
7B	Happy Heater (HN 4020A)	
7A	J-580 Mark II (MW 5020)	P10A
17	J-680 Lassie (LW 6020)	P10A
1A	S-131 Supra 200 (SW 2020)	P10A
6	S-181 Tropic	P10A
1A	S-231 Supra Fan	P10A
6	S-281 Temp-Rite 7 (SW 1120)	P10A
23	S-331 Supra 300	P10A
1A	S381U Temp-Rite 9 (SW 3120)	P10A
23	S-431 Supra 400	P10A
7	S-471 Temp-Rite 95 (SW 4720)	P10A
7	S-481 Temp-Rite 10 (SW 4120)	P10A
23	S-571 Temp-Rite 15 (SW 5620)	P10A
20	S-581 Equator (SW 5120)	P10A
23	S-681 Equator II	P10A
41	TR-2000 (TR2020)	P15A
42	TR-3000 (TR3020)	P15A
30	TR-4000 (TR4020)	P10A
23	TR-5000	P10A
3	TR-6000 (TR6020)	P10A
23	TR-7000	P10A
37	Blue Flame 3" Dia. Heater Wick with rectangular clip fittings	
37A	Blue Flame 3" Dia. Heater WIck with two round pin fittings	
37A	Series 8 and Series 15 Blue Flame (Made in U.K. or Iran) H210, 42202	
37A	P159905, P150056 Standard Blue Flame	
37A	P150060 Deluxe Blue Flame	
37A	P150080 Economy Cooker Heater	
37A	Outdoor Cooker Heater, H2201 Pastel Green	
37	JH210 (P169901) Series 16 and 25 (U.K.)	
49	001 Silhouette, 0002, 0003	
49	Aladdinette P2902, Series II, new series	
49	Aladdinaire Double Two 0004; Duet	
49	2901, 2902, 3901 Kindeler	
49	No. 201 and 202 Burners, P939907	
50	Greenhouse Series 22	
50	Master Gardener Deluxe w/2" Burner	
50	No. 203 Burners, P929905, P330001	
50	Aladdinique Series 26	
50	Treble-O-One, Trebel-O-Two	
50	Treble-O-Three, Trebel-O-Four	
51	Part N-230, Ref #51, Series 23 Burners	
51	Deluxe Greenhouse w/1" Burner	
52	1" Ref #55, Series 21, 21c; Part R-199	
52	Aladdinette P2901, Greenhouse w/1" Burner	
53	1" Lamp Wick, Model B-C-21C	
53	Part No. P989986	
54	Model 14, P989902, 1" Wick	
55	Model 11, 12; P989952, 1" Wick	
56	1/2" Diameter Wick, Model 32 Blue Flame, P999908	
N/A	BiAladdin Sahara	
N/A	Model 51, Model 61, Model 63	
N/A	Model S-1, Model S-2	
	ALLIED	
7B	YD-789NA, YD-789	
7	JG-221, SunRed, TD-815	
4	YD-818	
	ALOHA	
21	JY-1120	P10A
3	JY-1130	P10A
7B	JY-4265, JY-426	P10A
7	JY-7475, JY747S	P10A
31	JY-505	P10A
	AMERICANA	
24	AR-68	P30A
2	AR-100 (9,500 BTU)	P30A
3A	AR-140, AC-200	P20A

*15T & 16T are Top piece only
15-2P & 16-2P are complete two part assemblies

Wick Part #	Make/Model	Igniter#
	AMERICAN WICK HEATER	
8	AWHC-2230	
1A	AWHR-1100	
7C	AWCS-8500	
	ARTIFEX	
6	S-100	P10A
2	S-200	
3A	S-300	
	A.P.I. ARTURO	
4	YD-818	P10A
21	JY-1120	P10A
3	JY-1130	P10A
7B	JY-426A; YD-789NA	P10A
7A	KF-3200A	P10A
	AVANTI	
2	KH-10	P30A
3A	KH-20	P30A
	BANDO	
1	BK-96	P10A
5	BK-195	P10A
	BASIC	
47	145	
45	650,700	
	BOMBARDIER	
7	CR-10, R-12	P10A
23	R-15, C-20	P10A
	BOSS	
39	Boss 8	
	BUTTERFLY	
5A	Cookstove 2688	
	CANDLE	
22	12,000 Btu Conv.	
10	8,000 Btu Radiant	
	CITATION	
6	SCJ2012, 2013	
7	SCJ2015, 2016	
23	SCJ2017, 2020	
	CODEP	
2	5700	P30A
3A	5800	P30A
	COMFORT GLOW	
8	C20000, C20000A	P10A
3	C22,600 (WA3090)	P10A
3B	C22,800 (pins)	
38	GRW-6 (6800 Btu)	P10A
15*	GRB-8, GRW-8, A	P10A
16*	GR-8X, GRW-8B	P10A
16*	GR-9, GR-9A, GR-9B	P10A
16*	GRF-9,9A,GRF-9B	P10A
12	GC-11 (WA3000)	P10A
12	GC-11A;11B (WA3030)	P10A
8	GC-19 (holes)WA3050	P10A
8A	GC-19A (pins) WA3010	P10A
8A	GC-19B (holes)WA3040	P10A
16-2P	R10,000 (WA3080)	P10A
42	R10,500	P15A
8	R15000 (WA3060)	P10A
3A	SC-20 (WA6020)	P30A
2	SR-10 (WA6000)	P30A
3A	SR-14 (WA6010)	P30A
42A	SX-2E (WA3095) clips	
15-2P	WA1000 (RT-4)	
15T	WA1010 (RT-4A)	
16-2P	WA2000 (RT-5)	
16T	WA2010 (RT-5A)	
	COMFORTEMP (GOLDEN GLO)	
3	GG 8440	P10A
21	GG 8445	P10A
9	GG 8420	P30A
	COMFORTOR (Litwin)	
2	110, 150	
8	200	
	COMMANDER	
1	CH-96	P10A
1C	CH-100	P10A
	COSY	
5A	100	P10A
4	200A	P10A
2	260, 500	P30A
3A	420,510	P20A

Wick Part #	Make/Model	Igniter#
	CORONA	
21A	18-DK	P10A
21	11-DK, A; 17-DK,A, B,C	P10A
30	12-DK, SL-5	P10A
3	22-DK, A, B, C; XL-DK	P10A
3B	23-DK	P10A
28	SP-DK, SP-DX, A, B	P10A
28	SX-3, C, F; SX-5	P10A
4	SS-DK, SS-DX	P10A
29	ST-DK	P10A
31	SX-1; SX-2, C; SX-L	P10A
32	SY-13; SY-35	P10A
42A	SX-2E, SX-2EF	P10A
	CRESTLINE	
25	3000,3010, 4000, 4010	P30A
26	3500, 3510, 4500, 4510	P30A
26B	3520, 3521	P30A
16*	3530,3531,63206,63205	P10A
16*	63203	P10A
27	3600, 3650, 4600, 3601	P30A
26A	3700,4700	P30A
20A	3800, 3801	P30A
12	63304	
3	3870	P30A
8	3880, 3881, 63305	P10A
	DANRICH	
24	Danrich I	P30A
10	Danrich II	P10A
	DESIGN HOUSE	
9	11-2602-49, 11-2605-38	P30A
9	11-2604-38,11-2609-04	P30A
40	11-2606-38	P30A
9A	11-2607-38, 11-2608-58	P30A
9	11-2609-04	
40	11-2612-04	
	DIXIE (See Everglow)	
	DYNA GLOW	
1	14-2601-32, 14-2602-32	P10A
1	Radiant 20	P10A
3C	RMC95-C	P30A
9	14-2602-38; Radiant 30	P10A
9A	14-2602-45	P10A
8	14-2603-32; Maxi 20,000	P10A
	EASY	
1	EZ 2200; EZ 2220	P10A
5A	EZ 4750; 100	P10A
	EGAWA	
3A	HKS-50; HK-350	
	EMERSON (Sunshine)	
6	R-800	P10A
7	R-1200	P10A
23	C-1500	P10A
	ENERGY MART	
15*	EM-22A, EM-25	P10A
16*	EM-M221, EM-F221	P10A
8	EM-51C (holes)	P10A
8A	EM-51C (pins)	P10A
12	OSO31	P10A
6	EM-1702-RX	P10A
38	EM-1720-EX	P10A
	ENERGY STAR	
17	EKS-123R	P10A
3A	EKS-146C	P10A
5	EKS-198C	P10A
	ENVIROTEMP	
24	30460 (6800 Btu)	P30A
2	30462 (9500Btu)	P30A
2A	Radiant 101, 30497	P10A
2A	Radiant Fan 111, 30494	P10A
3A	30464 (18000 Btu)	P20A
8B	Omni 230 (23,000 Btu)30495	P10A
5C	Omni 200 (20,000 Btu)30498	P10A
1C	Radiant Fan 110, 30499	P10A
8	CV-2230, 30496	P30A
1A	CT1100 (30492),CT1200(31495)	P30A
1A	CT1100F,RF 1300 (31495)	P30A
3B	23-DK (22,800 BTU) ,30441	P10A
3C	CV-2300 (31493)	P30A
	EVERGLOW (Evergo)	
7B	P-E1, P-E3, PE-12 (30486)	P10A
6A	P-E2	P10A
7A	PT-E4 (30487)	P10A
17	PT-E5, PT-E16 (30489)	P10A
18	P-E8 (30488)	P10A
	EVERSPLENDOR	
1	HT-2	
	FANCO	
8	Warm Air Series 22, Conv.22	P10A
1	96, 9600; 100	P10A

Wick Part #	Model	Igniter#
	FLAMEGLO	
4	90	
5	910	
2	920, 926	P30A
3A	942,950	P20A
	FUJIKA (FUJICA)	
7	New Family KRF225	P10A
7B	KSP222, 231 Hi Pet, KS-10	P10A
7B	KSP-1 KSP229 New Pet	P10A
7B	KS-3, KS225 Hi Family,KSC-221A	
33	OSJ3 Jumbo	P10A
7A	OSL-21; Mark II; KF-3200A	P10A
7A	KS-4A, KS-4AD	P10A
6A	KS-2A	P10A
18	KS-8, KS-8A	P10A
17	KSL-301A New Lassie	P10A
	FUJISUN	
2	KK-01	P30A
3	KK-02	P30A
	FUTURA	
18	E-8 Emporer	P10A
7B	FH-11 The Duke (E-3)	P10A
6A	FH-21 The Duchess (E-2)	P10A
7A	FH-31 The Queen (E-4)	P10A
17	FH-41 The King (E-5)	P10A
33	FH-51 Jumbo	P10A
4	RB-2 Rainbow	P10A
	GEMINI III	
1	10,000	P10A
5	20,000	P10A
7	Family	P10A
3	Trojan Model 17000	P10A
	GENERAL	
11	YG3750, YK586	
	GERALD	
45	GH-6,GH-7,GH-11,GH-15	N/A
2	GH-12, GH-14, GHR-95	P30A
3A	GH-16, GH-18, GHC-180	P20A
	GOLDEN GLO(See Comfor-Temp)	
	GLO	
31	GLO 70	P10A
	HALLMARK	
7	HTR-95	P10A
2	HSC-98	
3	HSC-180	P20A
	HAMAI	
2	HKS-25; HKF-100	P30A
3A	HKS-50; HKS-60	P30A
	HANDY MASTER	
38A	HM-8	P10A
16T	HM-10 (Top Piece)	P10A
16-2P	HM-10 (Complete)	P10A
8	HM-19	P10A
	HANSON	
2	5700	P30A
3A	5800	P20A
	HEAT BUSTER	
9	HB 105	P10A
5	HB 1950	P10A
	HEAT-GLO	
9	TS-106	P30A
6	SK-80	P10A
5	SK-200C	P10A
14	TS-200J, TS-201J	P30A
3A	SK-150, SK-152C	P20A
	HEAT MATE	
10	400, 400E,500	P10A
11	450, 600E, 600EW (K-950)	P10A
10	650GE, 650GEW;670GED	P10A
10	670GEDW,700EF;810(K850)	P10A
22	800 (K-950C)	P10A
11	1010, 1050	P10A
3A	KA-1 2000	P10A
1	K-5	P10A
2	K-10	P10A
8	K-20, 2200	P10A
	HEAT-MOR	
2	A7000, A9600 Sanyei	
HENRY ISLAND (See Futura)		
	HIKARI	
11	KS-98	
	HITACHI	
26	OVH-230GE; OVH-231GE	
26	K-9200	
25	OVH-185GE; OVH-186GE	
27	OVH-220	

Kerosene Heater Wick Selection Chart Listed By Heater

Wick Part #	Make/Model	Igniter#
	HUSKY II	
3	Husky II	
	IMARFLEX	
1	10,000; 10,500, 11,000	P10A
8	20,000, 21,000, 22,000	P10A
	INTERNATIONAL	
7	T-204 Cook Stove	
	KAI (Kupanoff)	
3A	2000	P30A
	KERO HEAT	
3C	CV-2300	P30A
1	CT-1000, IT-1000	P30A
2	BT-1000, CT-1400, CT-1500	P30A
8	CV-2000, CV-2200, CV-2230	P30A
1A	CT-1100	P30A
	KENROY (Kero Heat)	
7A	10-5R, 10,500	P10A
7B	10-2R, 10,200	P10A
6A	7-2R, 7,200	P10A
17	12-3R, G-104, 12,300	P10A
	KERO KNIGHT	
7B	Kero Knight D 789	P10A
	KERO SOLAR	
4	KMI-80	P10A
1	KMI-82, Master VM-180	P10A
	KERO SUN	
5C	DC-90	P10A
5	Director pre-A,A,B (#008076)	P10A
5A	Director pre-A, A, B	P10A
48	Model K cook stove (#013024)	N/A
4	(cotton) Moonlighter D,E,F,G	P10A
4A	(fiberglass) Moonlighter D,E,F,G	P10A
4B	(pins) Moonlighter H,I,J	P10A
4	Omni 15 pre-A,A,B,C (#005025)	P10A
1B	(pins) Omni 85B, C, 1978 model (#007024)	P10A
1D	Omni 85D,E,F,G,H (#007075)	P10A
2A	(pins) Omni 85I,J,K,L (#20450013)	P10A
5B	Omni 105D (pins) 1978 model (#008024)	P10A
5	Omni 105,E,F,G,H,I	P10A
5	(no pins) #008076 (#20451913)	P10A
5C	(pins) Omni 105J,K,L (#20450113)	P10A
8B	Omni 230 (Toyoset), Omni 105 M	P10A
8B	Omni 120 A, B (#20451513)	P10A
5C	Omni 200 Toyoset (#20450113)	P10A
1	Radiant 8 pre-H, H, I (#001024)	P10A
1	Radiant 10G, H, I, J (#20451613)	P10A
1D	Radiant 10K, L, M (#20452513)	P10A
2A	Radiant 40, Radiant 10, Type N,O (#20450013)	P10A
1	Radiant 22	P10A
1C	Radiant 36 B,C,D,E,F,G (#004024)	P10A
1C	Radiant 100 (#20451613)	P10A
2A	Radiant 101, Radiant Fan 111	P10A
1C	Radiant Fan 110 (Toyoset)	P10A
2A	(pins) Sunstream II	P10A
1C	Sunstream pre-A,A,B,C	P10A

IMPORTANT INFORMATION ON WICKS FOR KERO-SUN: Models Omni 105, Omni 85 & Rad 10

A. LETTER DESIGNATION: This can be found as part of the lot number on heater.

B. Pin Wicks 2A and 5C fit newer heaters that have wick drop type shut-off mechanisms.The wick is automatically lowered by pushing a button to the left of the knob (2A) or turning a little knob to the left of the wick knob (5C). All these heaters have a feature called a "wick life extender".

C. Wicks 1, 1D, and 5 do not have pins. The wick does NOT automatically drop. These heaters have SLIDE shut off assemblies that smother the flame by covering the wick with a metal cover. Omni heaters have a handle on the right side for this purpose. Radiant heaters have a slide handle on the left.

D. Wicks 1B and 5B have pins. The shut off mechanisms are the same as described in section C. These heaters were made before 1979.

	KERO-TECH (K-Tech)	
22	35 Beacon	P30A
3A	45 Beacon, 180 Beacon	P20A
24	Calor	P30A
2	Companion, Resident, Sable	P30A

NOTE: Numbers in () are original wick numbers.

Wick Part #	Make/Model	Igniter
	KEROTEMP	
5	Kero Temp	P10A
	KEROVIC	
9	Kerovic 98-KV01	P30A
	KEROWORLD	
3	KW-23	P10A
3B	KW-23B (pins)	P10A
3C	KW-24	P30A
21A	KW-18	P10A
42A	KW-10	P10A
	KERRAY (KER-O-RAY)	
1A	Hawaiian	P10A
3	Husky II	P10A
6A	Survivor II	P10A
8	Survivor III	P10A
7	Tahitian, Tahitian-DX	P10A
7B	Texan, Texan II	P10A
33A	Sahara	P10A
	KETAC	
1	Ketac KHF-100	P10A
	KEYMAR	
25	K-7200	P30A
26	K-9200	P30A
4	KM80 Sundowner	P10A
30	KM120 Sundance	P10A
21	KM180 Sunfire	P10A
28	RM1270 Sunseeker	P10A
31	RM920 Sunglow	P10A
46	SSM-150, Sunstove SM-740	P10A
	KOEHRING	
15*	KRB-8, KRW-8, KRB-93	P10A
16*	KRB-93A, KR-9, KRD-93, A	P10A
16*	KRF-9A, KRF-93, A	P10A
8	KC-19 (holes) KCM-200	P10A
8A	KC-19A, KCM-200	P10A
12	KC-11,A,B; KHL-120,A;	P10A
12	KCM-120	P10A
38	KRB-68	P10A
	KNAPP MONARCH	
9	18-2614-91 (11,500 BTU)	
40	18-2515-91 (22,500 BTU)	
9	18-2616-58; 11,000	
40	18-2617-32 (20,000 BTU)	
9	18-2619-91 (11,000 BTU)	
40	18-2606-38, 2612-32	
	KOGY and KOZY	
5A	100	P10A
4	200A	P10A
2A	500	P10A
	KUPANOFF	
3A	KAI 2000	
	LEO PET	
1A	LKH-22E	P10A
	LESLIE LOCKE (WarmUp Squad)	
7B	KH-1; KH-4	P10A
7A	KH-7	P10A
17	KH-10	P10A
18	KH-15	P10A
	LITWIN (see Comfortor)	
	LOUDI	
7B	F-100 Badger	P10A
7	F-115 Arctic Sun	P10A
3	E-196 Huski II	P10A
6A	E-720 Alaskan	P10A
1A	E-960 Yukon	P10A
	MAGNUM	
3	Magnum 23	P10A
	MAXIM	
7	ICC 747, 737, IMCC 797	*
7	KSF-225, KSP-225	*
	MEGA (See Futura for P-E Nos.) (See Hamai for HKS Nos.)	
	MITAKA	
5	Mitaka 7-201	P10A
	MULTIPLEX	
4	YD-818	P10A
1	HT-02	P10A
7B	YD-789NA; YD-815	P10A
	NATIONAL	
16*	OS 222; 2300R	P10A
15*	OS2201RX; OS2202RX	P10A
38A	OS161	P10A
	N.E.C.	
7B	N.E.C.	
	NESCO	
	Nesco 4215	

Wick Part #	Make/Model	Igniter
	NOBLE	
5	King	P10A
4	Queen	P10A
36	Warm Knight	P30A
	NORTHERN	
2	3601, 3602	P30A
	NORTH STAR	
5	KSA-105	
1	KSA-851	
2	NS-95	
3	NS-22	
4	RB-2 Rainbow	P10A
	NORTHERN ELECTRIC (See Sunbeam)	
	NORTHERN LIGHT	
4	RB-2 Rainbow	P10A
3	Magnum 23 Thousand	P10A
	NOVA	
5	One	P10A
9	Nine	P10A
	PACICO	
7A	OSL-21	
	PANASONIC	
16*	OS-26X, OS-26XB, OS-26 OS-224X, OS-224, OS-224XB OS-224XC, OS-F224X, 224	P10A
15*	OS-10RF, OS-10R, OS-9R	P10A
12	OS-34CX3, OS-13C, OS-35CX	P10A
8A*	OS-54CX32, 54CX1, 2; CXB, CXC, OS-351	P10A
38A	OS-161, OS-161X, OS-161XB	P10A
38	OS-14X	P10A

* Use wick with holes if wick sleeve is used.

	PERFECTION	
6	PSR-8; 80W	P10A
1A	PSR-10, 100 W	P10A
20	PSR-15; 150W	P10A
39	"500" Wick; 525, 700, 730, 735, (700X) 770	N/A
39	750G, 780, 790, 810, 822	
39B	Cook Stove, 331X	
	PDQ	
21	PDQ Furnace	
	PORTA HEAT	
5	SYK 20,000	P10A
1	SYK 10,000	P10A
	PREMIER	
2	KK-01	P30A
3A	KK-02	P20A
	PROSPERITY II	
4	HT--01	P10A
1	HT-02; CKH-4900	P10A
	QUAKER	
44	Deluxe	
	RADIANT KING	
7	RK-55	P10A
6	RK-70,RK-75,RK-110 (W261F)	P10A
1A	RK-100S (W361F)	P10A
7	RK-120, RK-155 (W511F)	P10A
7	RK-220, RK-250 (W713F)	P10A
23	RK-420, RK-450 (W713F)	P10A
20	RK-500C (W712F)	P10A
	RELYAN	
8	22 Convection	
9A	Signet 8000	
	ROBESON	
1	RAD 20	
1	03-2601-32 (Rad 9600)	P10A
1	03-2602-32 (***Rad 10,500)	P10A
9	03-2602-35, 38, 49	P30A
9A	03-2602-45	P30A
8	03-2603-32 (***Conv 20,000)	P10A
9	03-2604-38 Fan Force 10,800	P30A
9	03-2605-38 10,500 Steam Heat	P30A
40	03-2606-38 (*** 20,000)	P30A
9A	02-2607-38 Rad 10,800	P30A
9A	03-2608-58 (Part #2607-0101)	
9	03-2609-59, 03-2610-58	P30A
9	03-2611-58 (Part #18-2638-0304)	
40	03-2612-32, 38	P10A
9	03-2614-91; (11,500)	
9	03-2616-58, 03-2619-91 (11000)	P10A
40	03-2615-91;03-2617-32 (22,500)	P10A
9	KH1-2619WG (11,000)	

* 15T &16T are top only.
15-2P & 16-2P are complete 2 piece assy.

Wick Part #	Make/Model	Igniter
40	KG3-2615WK Kleen Burn II	
1	Part #KS-S0001	
8	Part #KS-S0008,2620	
8	KH2-2620WG (22,000)	
2	2622, KH4-2622WG (10,000)	
3B	KH5-2623WG (23,000)	
42A	KH6-2624WG 1990 model 10,000	

*** IMPORTANT INFORMATION ABOUT WICKS FOR ROBESON HEATERS

A. RAD 10,500 - Many times the only designation found on the heater is RAD 10,500.
- If your heater has a slide shut-off mechanism and the chimney glass is 3-1/2" high: use Wick #1
- If your heater has a wick drop type shut-off and the chimney glass is 4-1/2" high: use Wick #9.

B. CONV 20,000
- If your heater has the ignition knob under the tank and does not have a chimney glass: use Wick #8.
- If your heater has an ignition lever just to the right of the wick control knob and has a glass chimney: use Wick #40.

	SAGA	
6	100	
2	200	
3A	300	
	SAM-HWA	
7B	ICC747	
	SAMARITAN	
4	S-8700	P10A
1	S-13000, SR8200, SRT9600	P10A
5	S-19,500	P10A
1C	SR-9600	P10A
	SANYEI (see Heat-Mor)	
	SANYO	
24	OHR-H16A; OHR-G23H, Cabit	P30A
2	OHR-G25A; OHR-G28H	P30A
7	OHR-G28S	
3A	OHR-G30A;OFC-G41A;OHC-41J	P20A
3A	OHC-42A; (Wick OHW-120A,B,C,D)	P20A
24	OHR-240; (Wick OHW-65A,B)	P30A
2	OHR-261; (Wick OHW-85A,B),	262 P30A
2	OHR-280	P30A
3A	OHR-300; OHC-420; OHC-510	P20A
2	OHR-1010, OHR-1020	P30A
3A	OHR-1410, 1420, OHC-2010,	2020 P30A
2	OHR-1010, OHR-1020	P30A
43	Auxiliary string wick	
	SEARS (564,------)	
2	350010, 350011	P30A
3A	350020, 350021, 351010, 351011	P30A
3A	403160 (SC-10), 403180, 403190	P30A
2	402200 (SC-10)	P30A
	(583.------)	
16*	35000, 402020, 402040, 402050	P10A
8	35100	
15*	402010, 402060	P10A
38	402030	P10A
16*	402080, 402090, 402110, 402120	P10A
38A	402140, 402150	P10A
16*	402160, 402170	P10A
12	403010	P10A
8	403020	P10A
12	403030, 403040	P10A
8A	403050, 403090, 403110	P10A
12	403070, 403080	P10A
8	403140, 403150, 403160, 403170	P10A
16*	404220, 404260, 404710	
15*	404230, 404250,402060	
12	404270, 404290	
8A	404280	
8	404730	
42	942.350110	P30A
42	35110	P10A
3	942.351110	P10A
3B	942.351112	
8B	699.351020 (SC230)	
2A	699.350210, 350211, 351350	P10A
5C	699.351750 (SC200)	
	SHARP	
6	HSR-23F; HSR-24F	P10A
7	HSR-31F,48D,88F,HSR-200	P10A
1A	HSR-36G, HSR-37G	P10A
7B	HSR-70	P10A

Wick Part #	Make/Model	Igniter
	STA-GLO	
31	RH-10	P10A
	SHETLAND	
1A	KHR-96	
	SUN AIR GLO	
3	US-23-5	P10A
31	US-8-5	P10A
28	US-9-5; US-11-15	P10A
30	US-12-5	P10A
21	US-18-7	P10A
	SUNBEAM	
2	3601, 3602, 3603	P10A
4	3621	P10A
3A	3623, 3625-2, 3627; 5800	P30A
	SUNCREST	
25	4000, 4010	P30A
26	4500, 4510	P30A
27	4600, 4601	P30A
26A	4700	P30A
3	4870	P30A
20A	4800, 4801	P30A
	SUN HOUSEWARES	
6A	K-72	
7	K-100	
7A	K-102	
18	K-200	
	SUNNY (see Cosy)	
	SUNNY-VOX	
9	SU-9805	P10A
	SUNSHINE (see Emerson)	
	SUNSTAR	
1	EZ 2220	P10A
5	BK 195	P10A
	SUNWISE	
2	SPR-10, SPR-95	P30A
22	SPC-12	P30A
3A	SPC-180	P20A
	TAKO	
3	5DK	P10A
5	KSA105F	P10A
	TATUNG	
4	8,000 Btu	
	TEKNIKA	
10	TKH-800E,800EU	P10A
11	TKH-1000E,1000EU; TKH-1010E	P10A
10	TKH-810E,TKH-1050GE	P10A
22	TKH-1200GE; TKC-1200E**	P10A
8	TKC-2000	P10A
	** a few of these models require a different wick: 20 or 35	
	TOSHIBA	
9	KSE-2150	P10A
14	KSE-2200, KSE-2850	
N/A	KSR363	
	TOYOKUNI	
7	TSK-23U, TSK30E, 64U	P10A
34	TSK-26EA, TSK26EGQ	P10A
1A	TSK-26EU	P10A
7B	TSK-80EU	P10A
35	TSK-80EA, TSK-80EGQ	P10A
23	TSK-90EU (no metal band)	P10A
31	84EU	P10A
20	TSK-90EA, TSK-90EGQ	P10A
20	TSK-90EU (metal band)	P10A
7B	101EU	P10A
20B	200EU (30483), 96EU	P10A
7	608	P10A
TOYOSET (by KeroSun)		
1C	Radiant 100; Radiant Fan 110	P10A
2A	Radiant 101, Radiant Fan 111	P10A
5C	Omi 200	P10A
8B	Omni 230	P10A
TOYOSTOVE-TOYOTOMI-TOYOSET		
2A	DC-60, DC-80	P10A
5C	DC-90, A, B; DC-100	P10A
2A	DR-86, DR-86F	P10A
5C	KRA-105 Double Kleen	P10A
1B	KSA-85C, 851C (pins)	P10A
1D	KSA-85D pre-I; KSA-851D	P10A
5B	KSA-105D (pins) 1978 model	P10A
5	KSA-105E, F, G, H, I	P10A
8B	KSA-120	P10A
5A	Model G Cooker	P10A
5C	Omni 200 (by KeroSun)	P10A
8B	Omni 230, B (by KeroSun)	P10A
1C	Radiant 100 (by KeroSun)	P10A
2A	Radiant 101 (by KeroSun)	P10A
1C	Radiant Fan 110 (by KeroSun)	P10A
2A	Radiant Fan 111 (by KeroSun)	P10A
2A	R-400	P10A
4	RB-2 Rainbow (cotton)	P10A
4A	RB-2 Rainbow (fiberglass)	P10A
4B	(pins) Rainbow B, C	P10A
1D	RC-11 pre-C	P10A
34A	RCA 25, RC-25A (024907)	P10A
5A	RCA-28B	P10A
2A	RC-11 Type D	P10A
1C	RCA-36, 36F Warm Breeze	P10A
1C	RC-37 B, C; RC-37F	P10A
2A	RC-41, 41F; RCA-87	P10A
1	RSA-8, RSA-10 G, H, I, J	P10A
1	RSA 21, 23, 24, 50, 85, 850	P10A
2A	SC-150, A, B; SC-400	P10A
5C	SC-200, A, B	P10A
8B	SO-230	P10A
4	TSC-15	P10A
5C	WC-105, WC-105R	P10A
8B	WC120, WC-120R,WC-105,E,F	P10A
	TOUCH 'N GLOW	
38A	CR7	
16*	CR8, CR9, CRF9	
12	K13	
8	K20, CR15	
	TURCO	
9	2000 Villager, 2001	P10A
9	2005 Colony, 2006 Estate	P10A
9	2007 Plantation II	P30A
9	2008 Estate 2010	P30A
9	2016 Carlton	P30A
13	2300 Homestead	P30A
14	3100 Tradition, 3105 Heritage 3205	P30A
9	4020 Citadel; 4025 Citadel II	P30A
9	4030 Tempvent	P30A
14	4506 Vintage	P30A
	UNION	
9	Therma 10 (30482)	P30A
9	Therma 12F (30484)	P30A
14	Therma 21 (30483)	P30A
UNITED AMERICA HARDWARE		
7B	Air Warmer (8,000 Btu)	
7B	Air Warmer - 379 (10,500 Btu)	
U.S. STOVE CO. COOK STOVE		
44	Cook Stoves (Various)	
39	US-89A, US-89P; Boss 8	
	VALOR	
47	140 Radiant Deluxe; 141 Sunrise	
47	145 Super Fyrside (8 pieces)	
45	Heatmiser 100, 200, 420	
45	Valmin, No. 14, L Type (& No.,33)	
45	Valiant, L60,L207,L210,100,210	
45	51 Viceroy, Valor Vector 1&2, 420 Cheap Heatio	
45	Viking Vulcan, Valormatic	
109	(Valorheat wick)Autoheat 1& 2	
109	239 Gardin Lover, Heatmiser 150 Auto, Super Viking	
110	(200F wick) 64G,64W Cooking Stove, (300F wick)65,65S Boiling Stove	
122	("22" wick) 56,106R, 623R, 104	
126	(600R wick) 625,685,785	
133W	12, 32K Elite Albion, 210	
139	Kindler 6139,410 Safeway, 626-627, 16-17-19 cookers	
39	525-585,525R,10R (500F)	
135W	(Valmax wick) 160 Majestic Mk I & MK II, 160 Auto Majestic (199359) L180 Log-Glo, Auto.	
VAN WYCK (same as Robeson)		
	VORTEC FTTA Ltd.	
5A	19,000	P10A
4	10,000	P10A
	WARM MATE	
11	600EW; 670E	P10A
10	650GEW; 670GEDW	P10A
22	850	P10A
WARM-UP SQUAD (see Leslie Locke)		
WESTERN AUTO (see Citation)		
	WHITE GATE	
1A	Model 100, 9600 Btu, K192 KET	P30A
3A	20,000 Btu	P30A
	YUASA	
24	J-5; Danrich I	
2	J-10	P20A
2	J-20	P30A
22	J-30; (pre-1981, no metal band)J-35 (No Metal Band)	P10A
10	J-30;Danrich II (with metal band)	P10A
3A	J-37; J-40,J-45,J-46, J-50	P30A
10	J-35 (with metal band)	P10A
19	20 Sunglow	P10A
7A	30 Sunglow	P10A
7B	100 Sunglow	P10A
33	Super Sunglow	
43	Auxiliary String Wick	

How to clean the wick:

1) Take the heater outdoors on a windless day

2) Remove the cartridge tank from the heater. (If so equipped)

3) Ignite the heater letting it burn at full capacity.

4) Keep the heater burning until the fuel runs out and the flame dies out naturally. (Wait approximately 30 minutes for the unit to cool and then remove the wick)

5) If the wick is hardened due to the presence of degenerated or contaminated fuel, cleaning it once is not enough to eliminate its carbon content entirely. So clean the wick two or three times by brushing with a medium hardness toothbrush.

6) After you have cleaned the wick, put the cartridge tank back in the heater. Wait 30 minutes or longer to allow the wick to absorb fuel fully, and then ignite the heater.

7) If cleaning does not make an improvement in the wick and remains hard at its upper part, then replace it.

RAY-O-VAC Heavy Duty Batteries

Part #	Desc.
HD-AA	Size AA
HD-C	Size C
HD-D	Size D

The battery most commonly used in wick heaters is size D.

Wick Heater Chimney Glass by Size

Height	Outside Diameter	Description	Part#
2 1/4"	4-5/8"	DR86 Lower, Toyostove	N56
2 5/8"	4-1/2"	Crestline 3000,3010; Keymar K7200	M10
2 7/16"	4 13/16"	Turco 2005,2006, 2008, 2010	N49
2 1/2	5"	Sanyo OHRG28H,Yuasa J10	NLA
2 1/2"	5 11/16"	Corona SPDX;Sun Air US9-5	M35
2 9/16"	4 3/16"	Sanyo OHR23; Calor	N86
2 3/4"	4 1/8"	Handymaster HM8;Sears 40214; CR-7	N87
2 13/16”	5”	Kerosun/Toyostove Radiant 8; S8200;670GE	N66
2 13/16"	4 13/16"	DC-80 Lower (toyostove)	N93
2 7/8"	4 3/4"	Crestline 230GE, Toyo DC80 lower	M84
2 15/16”	3 7/8”	Sanyo 240; Yuasa J5; AR-68,30460	M77
2 15/16”	5 1/16”	HM500K;650-GED;670-GED	N69
3 1/16"	4 3/4"	Toyokuni 26EA, 26EGQ	M65
3 1/8"	4 11/16"	Alad J380,Ever PE2, Fujika KS2A	M20
3 1/8"	5 7/16"	Alad J580,Mark II, Old PTE4,12	M14
3 1/8"	5 5/8"	Toyostove DC90,100;KRA105 lower	N96
3 1/8"	5 13/16"	Sanyo 10600,41,42,300,1410;J37	M22
3 1/8"	5 7/8"	Toyostove DR86 upper	M81
3 1/8"	6 3/8"	Citation 2013	N64
3 5/16"	4 13/16"	Rad9600;Toyokuni 26EU,HM 700	M70
3 5/16"	4 7/16"	Toyokuni 84EU;Glo70;Artifex S100	M64
3 5/16"	4 9/16"	Sanyo 25,240(113-00); C Glow, Sears	M60
3 3/8"	4 1/2"	Alad B131; TR7 Chimney	N/A
3 3/8"	5 3/16"	Crest 250GE; 80EU,HM800,J35,1200GE	N80
3 3/8"	6 5/16"	S581U; RK500,Perf PSR15;90EGQ	M82
3 7/16"	7 13/16"	Toyostove DC90,100,KRA105 Upper	N74
3 3/8”	4 1/2”	Aladdin B131, TR-7 Chimney	N59
3 7/16"	4 13/16"	Alad S381;Perf PSR10;RK100S	N76
3 9/16"	5 1/4"	Alad S481,TR10,11; Arctic Sun; RK250	M50
3 9/16"	5 7/8"	Kerosun Director A,B	N85
3 13/16"	4"	Turco 2007,Union Therma 10	M67
3 13/16"	5 1/16"	KeroSun R10,36;Rad100,110	M79
3 15/16"	5 5/16	Everglow PE12	M16
3 7/8"	6 3/8"	Everglow PTE16 (new style)	M31
3 7/8"	7 3/8"	Toyostove DC80 upper	N91
3 15/16"	4 15/16"	Toyoset Rad101, Rad40	M54
4 5/16"	4 13/16"	Robeson radiants with 9-9A wicks	M63
4 5/16"	5 7/8"	Sanyo OHC420; Yuasa J40, SunB3625	M25
4 5/16"	6 3/16"	Sanyo 2010, Yuasa J45,46;SunB 3627	M40
4 5/16"	6 5/16"	Toyokuni 96EU,200EU; CGlow R15000	M38
4 3/8"	5 7/8"	KeroSun Director (Pre-A)	M28
4 7/16"	6 5/16"	Alad Equator II,TR20;RKing450	M83
4 7/16"	9 1/8"	Robeson 2615 Outer Glass	NLA
4 9/16"	5 15/16"	Turco 2300 Homestead	G327
4 5/8"	4 13/16"	Turco 2015,16,18,4020,25;Union 12F	M90
4 11/16"	6 5/16"	Robeson 2606,2612,2617	M18
4 7/8"	3 1/2"	Aladdin TR2000	M68
5 1/16"	5"	Toyostove RCA87; Kogy500	C300
5 7/8"	4 1/16"	Corona SX2E,K World KW10	N88
5 7/16"	4 1/8"	Aladdin TR3000	N61
5 15/16"	4 11/16"	Corona SX2; Sun Air Glow US8-5	M33
6 1/2"	5 15/16"	Corona SX3;Sun Air Glow US 11-5	M89
7 1/16"	5 13/16"	KeroSun Moonlighter,Toyostove RB2	M57
7 5/16"	8 9/16"	Koehring KHL120,A;Sears 40304,8	N100
8 1/4"	4 11/16"	Lasor Clean LR350	N53
8 7/8"	6 5/8"	Lasor Clean LR450	N94

Sometimes, an entire chimney is sent instead of the glass.
We expect that some glass will become obsolete during the season.

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Master Generators

This section was put together to help you in servicing generators designed by Desa International. PHP carries all of the parts for the Master Generator line.

If you need technical assistance, feel free to call **Desa International** at **1-866-323-5190.** Whenever possible, please have your model number and the nature of your problem before you place a call for technical service. If you are unable to reach a technician at the factory, you can call one of ours at **1-800-362-6951or e-mail us at techservice@portableheaterparts.com**

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Frequently Encountered Generator Problems

Problems	Remedies
1. No Power	1. Bad Capacitor (Replace) 2. Bad Diodes (Replace)
2. Low Voltage	1. Ensure running too slow a. Set engine at 3720 RPM's
3. Auto Idler Not Working	1. Bad PC Board (Replace) 2. Bad Solenoid Assembly (Replace)
4. Engine Hunts	1. Check Air Filter 2. Only turn on auto idler when engine is warm
5. Starter cord can't be pulled	1. Oil in head a. Remove spark plug and pull pullcord until all oil is out of head.

Generator Troubleshooting

Warning-Only a qualified electrical service person should service and repair generators.
Use only factory approved replacement parts.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
No voltage when starting generator with no electrical load	1.Defective capacitor 2.Winding short circuit or loose 3.Defective rotor diode 4.Loss of residual magnetism	1. Replace capacitor 2. Check resistance of coils connections 3. Replace both diodes on rotor 4. Apply 12-volt battery to capacitor terminals for 2-3 seconds
Voltage is less than normal voltage with no electrical load	1.Engine speed to low 2.Defective rotor diode 3.Partial short circuit in winding 4.Defective capacitor	1. Set engine speed to 3720 RPM 2. Replace both diodes on rotor 3. Check resistance of coils 4. Replace capacitor
Voltmeter reading more than 10% high with no electrical load	1.Engine speed too high	1. Set engine speed to 3720 RPM with no load
Voltmeter reading correct with no electrical load, but more than 10% low when electrical load is added	1.Defective rotor diode 2.Electrical load to high 3.Engine not running properly	1.Replace both diodes on rotor 2.Do not overload generator 3.Contact an authorized engine service center

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Motor HP Rating	Approx. Running Watts	Approximate Starting Watts* Universal Motors (small appliance)	Repulsion Induction Motors	Capacitor Motors	Split Phase Motors
1/8	275	400	600	850	1200
1/4	400	500	850	1050	1700
1/3	450	600	975	1350	1950
1/2	600	750	1300	1800	2600
3/4	850	1000	1900	2600	x
1	1000	1250	2300	3000	x
1 1/2	1600	1750	3200	4200	x
2	2000	2350	3900	5100	x
3	3000	x	5200	6800	x

Model	Stator Main Winding*	Stator Auxiliary Winding Δ	Rotor Primary Winding †	Rotor Secondary Winding †	Capacitor MFD 450 Volt	Diodes (2) 800 Volt
MGH3000	1.6	5.9	6.9	1.33	16	6 Amp
MGH4000C,CI	0.71	2.17	0.54	2.07	40	70 Amp
MGH5000C,CI,CIE	0.54	1.38	0.61	2.29	50	70 Amp
MGH6000C,CI	0.37	1.01	0.68	2.57	60	70 Amp
MGH7000C,CI	0.28	0.78	0.77	2.9	70	70 Amp
MGH10000	0.40	0.90	0.37	0.50	80	70 Amp

* Connect T2 (green) and T3 (black). Measure resistance between T1 (red) and T4 (yellow).
Δ Resistance between brown and white leads † Remove diodes to check resistance

Generator Test Procedures

Auto Idle PC Board and Solenoid Test:
With engine running, the auto idle switch in the on position and with no load on the generator, use your multimeter on the S1 and S2 terminals, the meter should read 24 volts AC.

If 24 volts AC is present replace the solenoid.

Capacitor Test:
After removing the capacitor, discharge it by connecting the two leads or shorting the terminals out with an insulated handle screw driver.

Check the capacitor using your trusty multimeter. Set your meter to the RX100 or 200 scale. Connect the multimeter leads to the condenser. The meters needle should deflect and return to infinity, a digital meter should run upscale to infinity. If these tests indicate a defective capacitor replace it, if the capacitor tests good reconnect it to the generator.

Diode Test:
Check the diodes which are mounted to the rotor. They must be removed from the rotor to be properly checked. Unsolder them and use your multimeter or a test light along with a battery to test that power will only pass through the diode in one direction.

If you find a defective diode and replace it, and test the generator and still have no output try the 12 volt battery test before going any further. During the diode test, the rotor could have lost its magnetism.

Engine RPM'S are too slow:
No load engine RPM's need to be set at 3,720.

Reflashing the rotor:
Connect two insulated jumper wires to the wires connected to the capacitor. Start the generator and momentarily connect these jumper wires to a good hot 12 volt battery. You should get a sharp arch as the excertation windings load pull the jumpers off of the battery and test the generator. Its possible that the exciter windings lost their charge.

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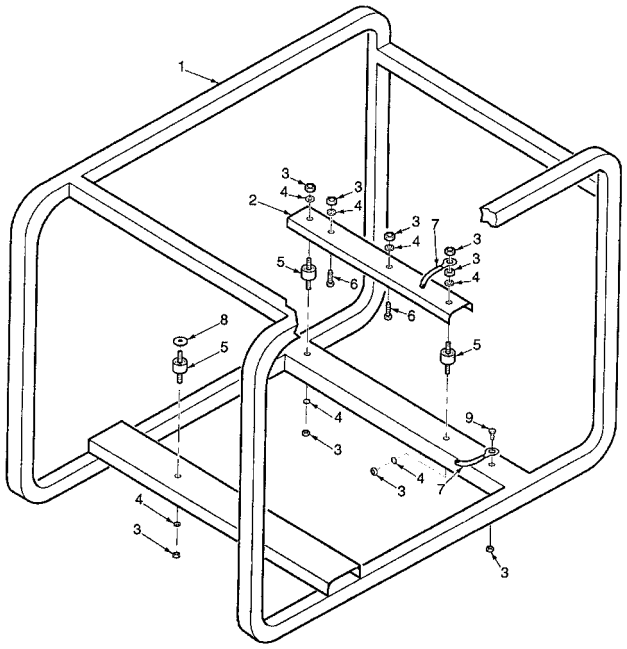
Master Generator Roll Cage

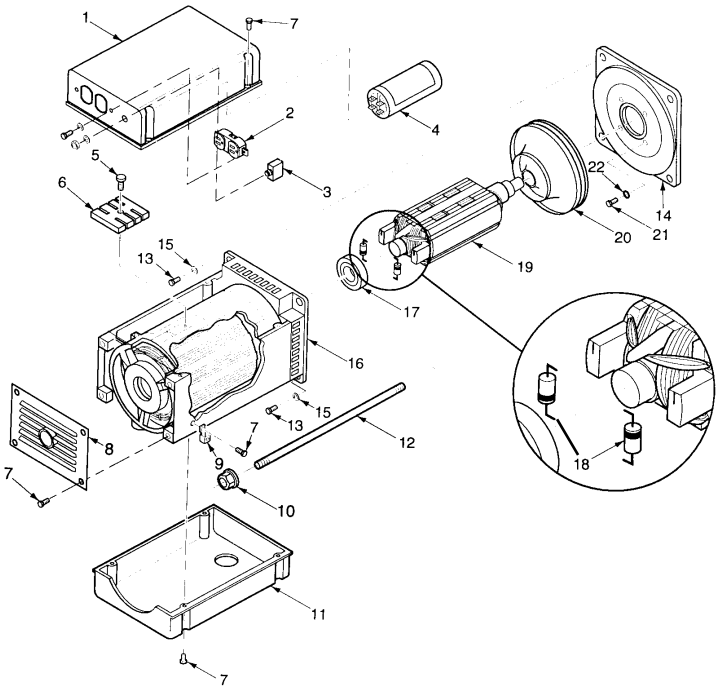
Model Numbers
MGH3000
MGH3000A
MGH3000B



Key No.	Part No.	Description
1	099781-01	Roll Cage
2	099754-01	Engine Spreader
3	NEC-5C	Lock Nut, 5/16-18 (qty. 9)
4	WP-5C	Flat Washer, 5/16” (qty. 7)
5	099853-02	Shock Mount (qty. 3)
6	04110002	Screw, 5/16-18 x 1-1/2 (qty. 2)
7	14138000	Ground Strap
8	21834000	Washer, 5/16 x 1-1/2
9	100406-01	Bolt, 5/16-18 x 3/4

Master Generator Alternator Assembly

Model Numbers
MGH3000
MGH3000A
MGH3000B



Key No.	Part No.	Description
	099722-01	Alternator Assembly*
1	100074-01	Top Cover
2	100445-01	120V,15A Duplex (GFCI) Receptacle †
3	22616009	Circuit Breaker, 20 Amp†
4	27002002S	Capacitor
5	26333000	Screw, M4 x 20
6	099863-01	Terminal Block
7	099701-01	Screw, M5 x 13 (qty. 13)
8	099848-01	End Plate
9	17587000	Ground Log
10	099891-01	Flanged Nut, 8MM
11	099861-01	Bottom Cover
12	099842-01	Draw Bolt
13	26310000	Screw, M6 x 16 (qty. 4)
14	27001005S	Engine Flange
15	WLE-4	Lock Washer, 1/4” (qty. 4)
16	**	Stator
17	27001002	Bearing
18	27001009S	Diode (qty. 2)
19	**	Rotor
20	27001006	Fan
21	26327006	Bolt, 5/16-24 x 5/8” (qty. 4)
22	WLE-5	Lock Washer, 5/16” (qty. 4)

PARTS AVAILABLE-NOT SHOWN

099866-03	Safety Info Decal
099866-04	Safety Info Decal
099867-02	Operation Decal

† Includes fastening hardware
* Includes reference numbers 1 through 22
**Parts not available. Included in alternator assembly

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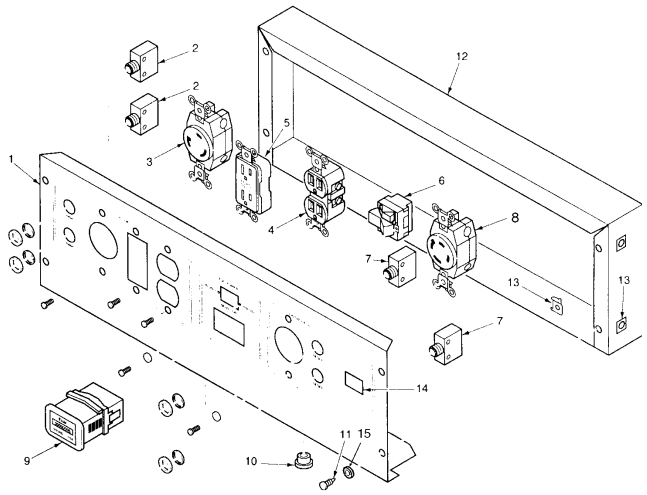
Master Generator Control Panel

Model Numbers

MGH4000C, MGH4000CI, MGH5000C, MGH5000CI, MGH5000CIE,MGY5000, MGH6000C, MGH6000CI, MGH7000C, and MGH7000CI



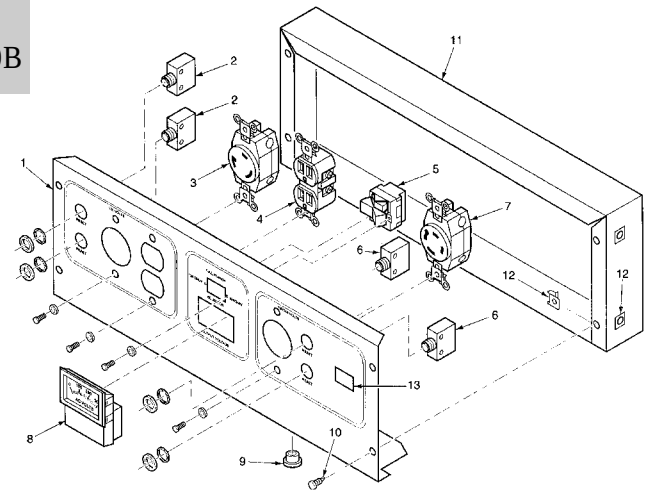
Auto-Idle Parts

100324-02	Solenoid Assembly
22822000	Roll Pin (includes plunger, nut, and lock washer)
100755-01	Linkage Rod
100756-01	Solenoid Mounting Bracket
100321-01	Nylon Spacer
100366-01	Rocker Switch
100495-01	Board & Switch Mounting Template
100105-01	Control Board Assembly

Key No.	MGH4000C MGH4000CI	MGY5000 MGH5000C MGH5000CI MGH5000CIE	MGH6000C MGH6000CI	MGH7000C MGH7000CI	Description
1	103349-01	103349-02	103349-03	103349-04	Control Panel
2	22616009	22616009	22616009	22616009	Circuit Breaker, 20Amp*(qty. 2)
3	099833-01	099833-01	099833-01	099833-01	120v, 30A Twist-lock receptacle
4	15324000	15324000 099836-01 (MGY5000)	15324000	15324000	120v, 15A Duplex Receptacle*
5	100445-01	100445-01	100445-01	100445-01	120v, 15A Duplex (GFCI)Receptacle*
6	099956-01	099956-01	099956-01	----------	Full power selector switch*
7	22616009	----------	----------	----------	Circuit Breaker, 20 Amp*(qty. 2)
	----------	22616010 226160011 (MGY5000)	----------	----------	Circuit Breaker, 25 Amp*(qty. 2)
	----------	----------	22616010	22616010	Circuit Breaker, 30 Amp*
8	099834-01	099834-01	099834-01	----------	120/240V, 20A Twist-Lock Receptacle*
	----------	----------	----------	099835-01	120/240V, 30A Twist Lock Receptacle*
9	101350-01	101350-01	101350-01	101350-01	Hour Meter
10	099760-01	099760-01	099760-01	099760-01	Bushing
11	100410-01	100410-01 24306006 (MGY5000)	100410-01	100410-01	Sems Screw, #8-18 x 1/2"(qty. 4)
12	100149-01	100149-01	100149-01	100149-01	Control Box
13	22261000	22261000	22261000	22261000	U-Nut (qty. 8)
14	099997-01	099997-01	099997-01	099997-01	Switch Plug
15	----------	WLI-2BL (MGY5000)	----------	----------	Lock Washer #8
†	103348-01	103348-02	103348-03	103348-04	Control Panel Assembly
†	103348-05	103348-06	103348-07	103348-07	Control Panel Asy. Auto Idle Models

Model Numbers

MGH4000B, MGH5000B, MGH6000B and MGH7000B



Key No.	Part No.	Description
1	099775-12	Control Panel (MGH4000B)
	099775-13	Control Panel (MGH5000B)
	099775-14	Control Panel (MGH6000B,MGH7000B)
2	22616009	Circuit Breaker, 20 Amp*
3	099833-01	120V, 30A Twist-Lock Receptacle*
4	15324000	120V, 15A Duplex Receptacle*
5	099956-01	Full Power Selector Switch* (MGH4000B,5000B,6000B)
6	22616009	Circuit Breaker, 20 Amp*(MGH4000B)
	22616011	Circuit Breaker, 25 Amp*(MGH5000B)
	22616010	Circuit Breaker, 30 Amp*(MGH6000B,7000B)
7	099834-01	120/240V, 20A Twist-Lock Receptacle* (MGH4000B,5000B,6000B)
	099835-01	120/1240V, 30A Twist-Lock Receptacle* (MGH7000B)
8	099748-01	Voltmeter
9	099760-01	Bushing
10	100410-01	Sems Screw, #8-18 x 1/2"
11	100149-01	Control Box
12	22261000	U-Nut
13	099997-01	Switch Plug
†	103348-01	Control Panel Assy (MGH4000B)
†	099778-08	Control Panel Assy (MGH5000B)
†	099778-09	Control Panel Assy (MGH6000B)
†	103348-04	Control Panel Assy (MGH7000B)
Δ	100177-01	Panel Schematic Decal

* Includes fastening hardware
Δ Not Shown
† Includes reference numbers 1 through 13

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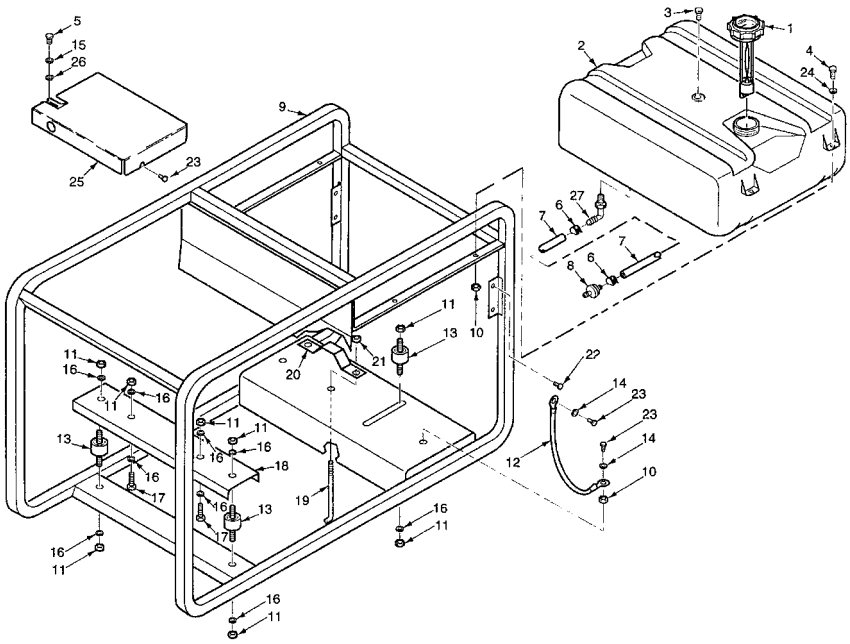
Master Generator Fuel Tank and Roll Cage

Model Numbers
MGH4000B/C/CI,
MGH5000B/C/CI/CIE,
MGH6000B/C/CI,
MGH7000B/C/CI



Key No.	Part No.	Description
1	25954000	Gas Cap/Fuel Gage
2	099832-01	Gas Tank (with 90˚ fitting)
3	25978000	Breather Assembly
4	M51043-01	Screw, 1/4-20 x 1” (qty. 4)
5	099701-01	Screw, M5-10
6	19508001	Gas Line Clamp (qty. 2)
7	25985005	Fuel Line
8	099743-01	Fuel Filter
9	099752-01	Roll Cage †
	099752-02	Roll Cage Δ
10	103880-01	Lock Nut, 1/4-20 (qty. 5)
11	NEC-5C	Lock Nut, 5/16-18 (qty. 8)
12	14138000	Ground Strap
13	099853-02	Shock Mounts (qty. 3)
14	WLE-5	Lock Washer, 5/16” (qty. 3)
15	WLI-3	Lock Washer, #10
16	WP-5C	Flat Washer, 5/16” (qty. 9)
17	HC5-11C	Bolt, 5/16-18 x 1 3/4” (qty. 2)
18	099756-01	Engine Spreader
19	099750-01	Hook Bolt, 5/16-18**(qty. 2)
20	099749-01	Battery Mounting Bracket**
21	NEC-5C	Lock Nut, 5/16-18***(qty. 2)

Key No.	Part No.	Description
22	100410-01	Sems Screw, #8-18 x 1/2” (qty. 4)
23	M10908-74	Screw, 1/4-20 1/2” (qty. 3)
24	WP-4C	Washer, 1/4” (qty. 5)
25	099965-01	Linkage Cover
26	WP-3C	Washer, #10
27	099742-01	90˚ Fitting with barbs
Parts Available - Not Shown		
	099866-01	Safety Info Decal*
	099866-02	Safety Info Decal**
	100003-01	Operation Decal*
	100003-02	Operation Decal**
	099873-01	Battery Cable (Positive, Red)**
	099873-02	Battery Cable (Negative, Black)**
	03157000	Fuel Line Grommet (qty. 3)

* For models MGH4000C, MGH5000C/CIE, MGH6000C Only
**For model MGH7000C Only
Δ For models MGH4000C and MGH5000C Only
† For models MGH6000C and MGH7000C Only

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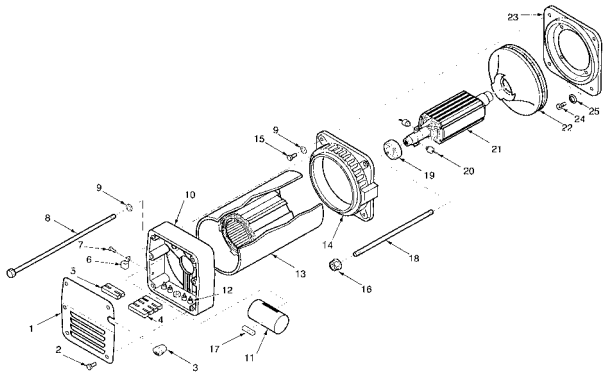
Master Generator Alternator Assembly

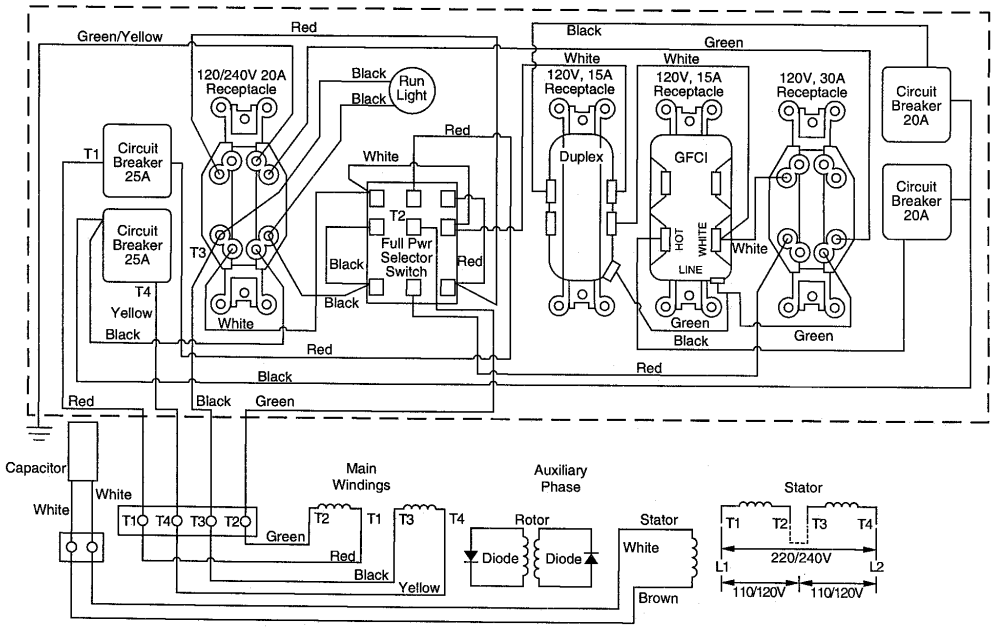
Model Numbers
MGH4000B/C/CI,
MGH5000B/C/CI/CIE,
MGY5000
MGH6000B/C/CI,
MGH7000B/C/CI



Key No.	Part No.	Description
	099723-01	Alternator Assy (MGH4000B/C/CI)
	099723-02	Alternator Assy (MGH5000B/C/CI/CIE/MGY5000)
	099723-03	Alternator Assy (MGH6000B/C/CI)
	099723-04	Alternator Assy (MGH7000B/C/CI)
1	099844-01	End Cover
2	099701-01	Screw, M5 x 13mm (qty. 6)
3	099760-01	Bushing
4	099863-01	Terminal Block (4-block) (MGH4000B/C/CI,MGH5000B/C/CI/CIE,MGY5000 Only)
5	099863-02	Terminal Block (2-block)
6	17587000	Ground Lug
7	M11084-26	Screw, #10-16 x 3/8”
8	**Stator Bolt**	
	099847-01	MGH4000B/C/CI (qty. 4)
	099847-02	MGH5000B/C/CI/CIE,MGY5000 (qty. 4)
	099847-03	MGH6000B/C/CI (qty. 4)
	099847-04	MGH7000B/C/CI (qty. 4)
9	WLE-5	Lock Washer, 5/16” (qty. 4)
10	099843-01	Bearing Housing
11	**Capacitor**	
	27004002S	MGH4000B/C/CI
	27005003S	MGH5000B/C/CI/CIE,MGY5000
	099845-01	MGH6000B/C/CI
	27007004S	MGH7000B/C/CI

Key No.	Part No.	Description
12	100054-01	Terminal Post (MGH6000B/C/CI,MGH7000B/C/CI) (qty. 4)
13	*	Stator
14	27003002	Fan Bracket
15	27003015S	Screw, M8 x 20mm (qty. 4)
16	099891-01	Rotor Nut, Flanged 8 MM
	27001010S	Rotor Nut (MGY5000 Only)
17	099892-01	Foam Pad
18	**Draw Bolt**	
	099842-01	MGH4000B/C/CI
	099842-02	MGH5000B/C/CI/CIE
	099842-03	MGH6000B/C/CI
	099842-04	MGH7000B/C/CI
19	27003003	Bearing
20	27003012S	Diode (qty. 2)
21	*	Rotor
22	27003008	Fan
23	27003007S	Engine Flange
	101839-01	Engine Flange (MGY5000 Only)
24	26322004	Bolt, 3/8-16 x 5/8” (qty. 4)
25	WLE-6	Lock Washer, 3/8” (qty. 4)
26	27003013S	Washer (MGY5000 Only)

* Not available by itself. Must purchase alternator assembly.



Wiring Diagram for Models: MGH4000B MGH5000B MGH6000B

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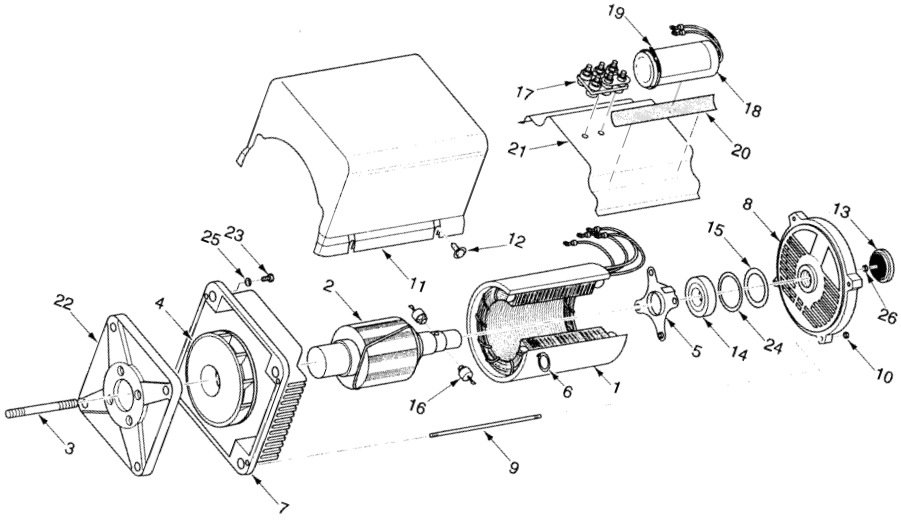
Master Generator Alternator Assembly

Model Number
MGH10000



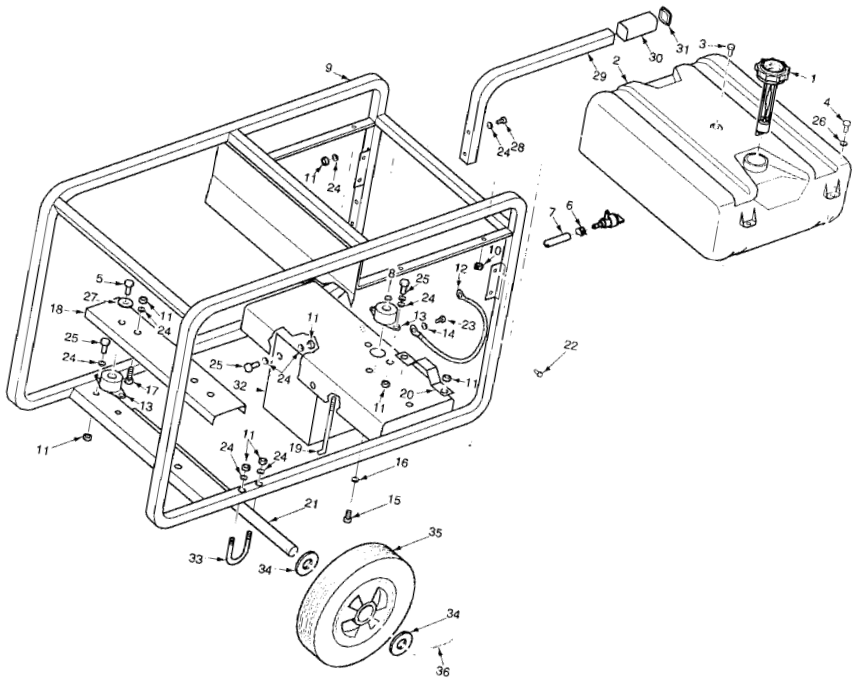
Key No.	Part No.	Description
1	****	Stator
2	****	Rotor
3	103188-01	Draw Bolt
4	103191-01	Fan
5	103192-01	Balancing Disc
6	103193-01	Lifting Eyes (qty. 2)
7	103194-01	D.E. Bracket
8	103195-01	N.D.E. Bracket
9	099847-05	Mounting Bolts (qty. 4)
10	270010105	Nuts (qty. 4)
11	103189-01	Top Box
12	099701-01	Screw and Washer (qty. 6)
13	103198-01	Plastic Cap
14	103199-01	Bearing
15	103200-01	Borelly Washer
16	27003012S	Diode (qty. 2)
17	103201-01	Terminal Block
18	099845-02	Capacitor
19	103204-01	Tie Wrap
20	099892-02	Foam Pad
21	103202-01	Capacitor Bracket
22	103190-01	Engine Flange
23	27003155	Bolts
24	103203-01	“O” Ring
25	WLE-5	Washer
26	099891-01	Hex Head Nut
†	102938-01	Alternator

**** Part not available by itself. Must purchase Alternator Assy

† Includes reference numbers 1 through 26

Master Generator Fuel Tank and Roll Cage

Model Number
MGH10000



Key No.	Part No.	Description
1	25954000	Gas Cap/Fuel Gage
2	099741-01	Gas Tank (w/90˚ fitting)
3	25978000	Breather Assembly
4	M51043-01	1/4-20 x 1” Screw
5	260302006	1/2-20 x 1” Screw (qty. 2)
6	19508001	Gas Line Clamp (qty. 2)
7	25985006	Fuel Line
8	WLE-6	3/8 Lock Washer
9	102752-01	Roll Cage
10	NTC-4C	1/4-20 Lock Nut (qty. 4)
11	NEC-5C	5/16-18 Lock Nut(qty. 18)
12	14138000	Ground Strap
13	17529000	Shock Mounts (qty. 3)
14	WLE-5	5/16” Lock Washer
15	HC6-10C	3/8-16 x 1-1/4” Screw
16	WP-6C	3/8” Flat Washer
17	HC5-11C	5/16-18 x 1-3/4” Bolt(qty. 2)
18	102962-01	Engine Spreader
19	099750-01	5/16-18 Hook Bolt (qty. 2)
20	099749-01	Battery Mounting Bracket
21	102933-01	Axle (qty. 2)
22	100410-01	#8-18 x 1/2” Sems Screw
23	M10908-74	1/4-20 x 1/2” Screw
24	WP-5C	5/16” Washer (qty. 24)
25	26007004	5/16-18 x 3/4” Bolt (qty. 10)
26	WP-4C	1/4” Washer (qty. 4)
27	WLI-8	1/2” Lock Washer (qty. 2)
28	H8C5-20C	5/16-18 x 2.50 Screw (qty. 4)
29	102920-01	Handle (qty. 2)
30	103046-01	Handle Grip (qty. 2)
31	103057-01	Handle Plug (qty. 2)
32	102936-01	Stand
33	100135-01	U-Bolt (qty. 2)
34	WP-16C	Flat Washer (qty. 4)
35	102932-01	Wheels (qty. 2)
36	C4-12C	Cotter Pin (qty. 2)
37	25946000	Fuel Shut Off
Δ	099866-02	Safety Info Decal
Δ	100003-04	Operation Decal
Δ	099873-04	Red Battery Cable (Pos.)
Δ	099873-02	Black Battery Cable (Neg)
Δ	03157000	Grommet (qty. 3)
Δ	103047-01	Muffler

Δ Not Shown

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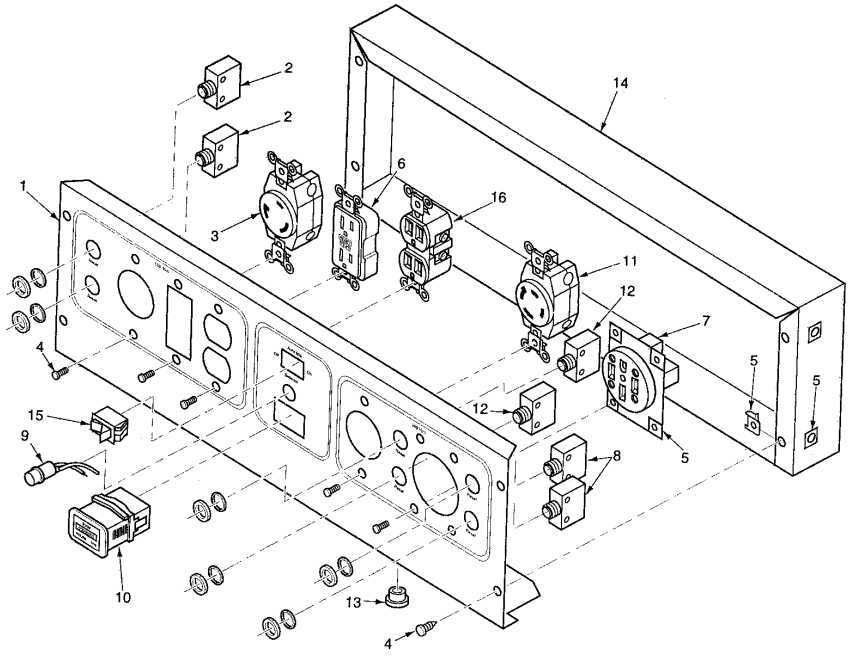
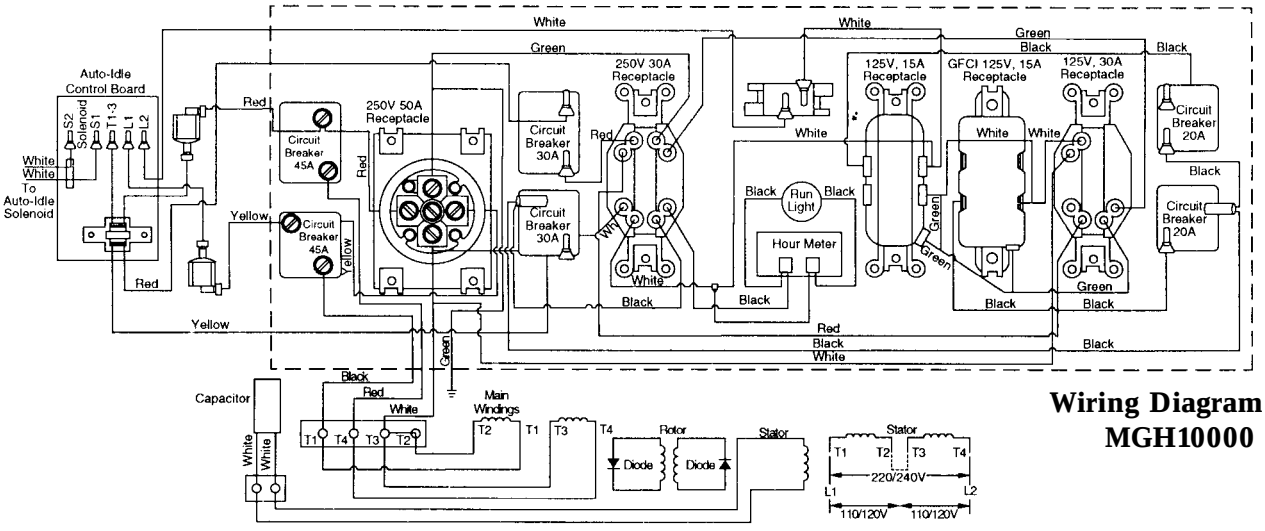
Master Generator Control Panel

Model Number
MGH10000

Key No.	Part No.	Description
1	103182-01	Control Panel
2	22616009	20 Amp Circuit Breaker (qty. 2)
3	099833-01	120V, 30A, Twist-Lock Receptacle
4	100410-01	#8-18 x 1/2" Sems Screw (qty. 16)
5	22261000	U-Nut (qty. 20)
6	100445-01	120V, 15A, Duplex (GFCI) Receptacle
7	103183-01	125/250V, 50A Receptacle
8	103184-01	45 Amp Circuit Breaker (qty. 2)
9	26299000	Run Light
10	101350-01	Hour Meter
11	099834-01	120/240V, 20A Twist-Lock Receptacle
12	22616010	30 Amp Circuit Breaker (qty. 2)
13	099760-01	Bushing
14	103185-01	Control Box
15	100366-01	Rocker Switch
16	15324000	120V, 15A Duplex Receptacle
†	102927-01	Control Panel Assembly
Δ	100177-05	Panel Schematic Diagram
Δ	103257-01	Auto Idle PC Board Kit

† Includes reference numbers 1 thru 16
Δ Not Shown





Wiring Diagram for MGH10000

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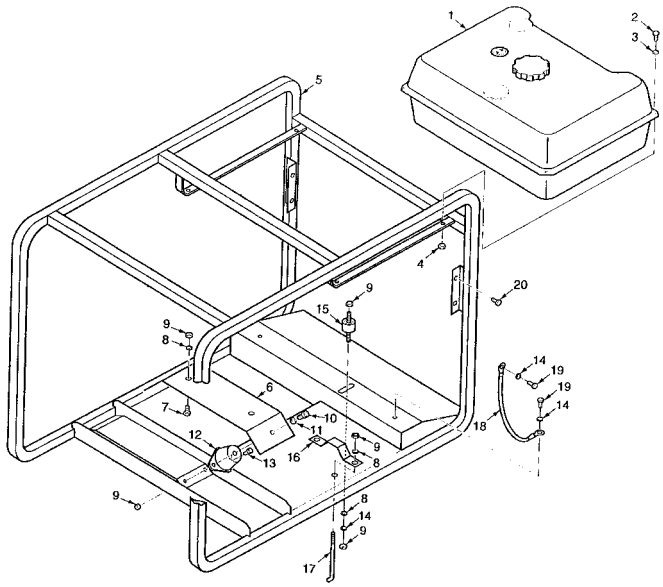
Master Generator Fuel Tank & Roll Cage

Model Number
MGY5000

Key No.	Part No.	Description
1	099935-01	Fuel Tank Assembly
2	HC4-6C	Screw, 1/4-20 x 3/4" (qty. 4)
3	WP-4C	Washer, 1/4" (qty. 4)
4	103880-01	Nut, 1/4-20 (qty. 4)
5	099943-01	Roll Cage
6	099945-01	Spreader
7	04110002	Bolt, 5/16-18 x 1 1/2" (qty. 2)
8	WP-5C	Washer, 5/16" (qty. 5)
9	NEC-5C	Nut, 5/16" (qty. 10)
10	26302006	Screw, 1/2-20 x 1" (qty. 2)
11	WLI-8	Lockwasher, 1/2" (qty. 2)
12	17529000	Shock Mounts (qty. 2)
13	26007004	Bolt, 5/16-18 x 3/4" (qty. 4)
14	WLE-5	Washer, 5/16" (qty. 3)
15	17529000	Shock Mount (qty. 2)
16	099749-01	Battery Bracket
17	099750-01	Hook Bolt (qty. 2)
18	14138000	Ground Strap
19	M10908-74	Screw, 1/4-20 x 1/2" (qty. 2)
20	100410-01	Screw, #8-10 x 1/2" (qty. 4)

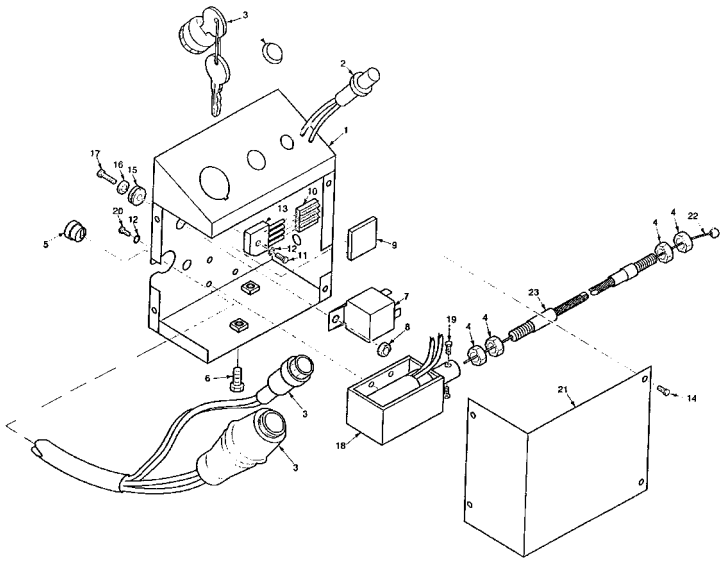
Parts Available-Not Shown

099947-01	Safety Information Decal
099948-01	Operation Decal
099873-01	Battery Cable (Positive)
099873-02	Battery Cable (Negative)
099954-01	Spark Arrestor



Master Generator Switch Control Box

Model Number
MGY5000



Key No.	Part No.	Description
1	101037-01	Switch Control Box
2	22721000	Low oil light
3	099936-01	Key switch, lamp & harness assy.
4	101039-01	1/4-28 Keps Nut (qty. 4)
5	099760-01	Strain Relief Bushing
6	101040-01	1/4-20 x 5/8" Hex Head Sems (qty. 2)
7	26498000	Relay
8	NTF-3C	#10-32 Hex Locknut
9	RN12000100	Adhesive-backed PVC foam
10	*	Connector
11	*	#6-32 x 1/2" Hex Tapping Screw
12	*	#6 Internal-tooth lockwasher (qty. 5)
13	26509000	Full bridge
14	26002006	#8-32 x 3/8" Screw (qty. 4)
15	15020000	Grommet
16	WP-3C	#10 Flat Washer
17	26499000	#10-32 x 3/4" Hex head screw
18	26490000	Solenoid
19	26494000	M4 x 8 Hex head screw (qty. 2)
20	26492000	M3 x 8 Hex head screw (qty. 4)
21	101038-01	Control Box Cover
22	101036-01	Cable
23	101035-01	Conduit
†	101103-01	Switch control box assembly

Parts Available - Not Shown

101042-01	Wire Nut

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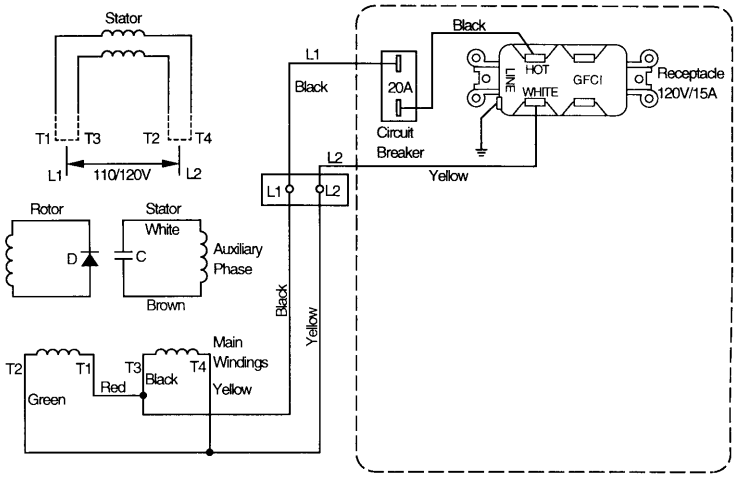
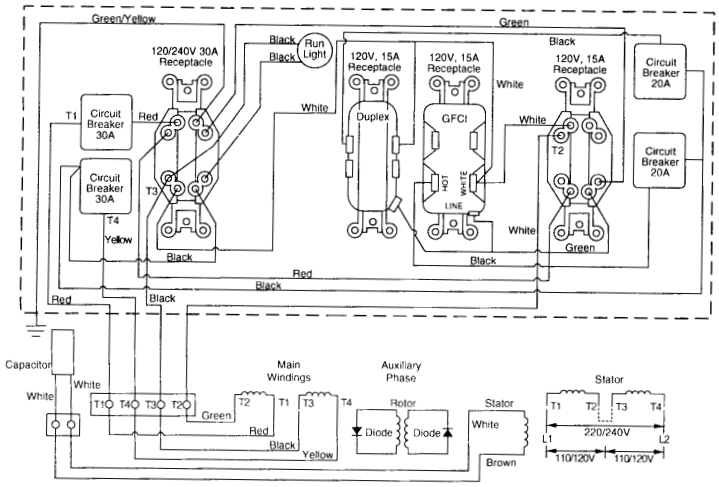
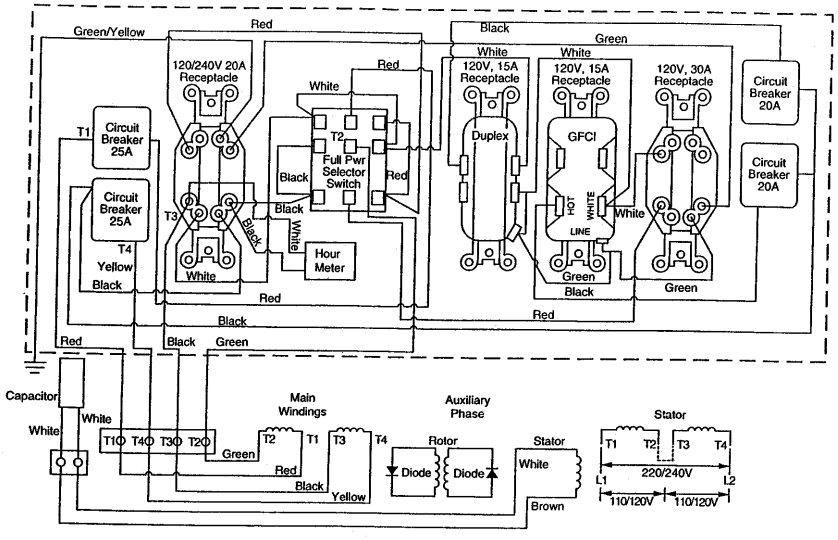
Master Generator MGH3000,A,B Wiring Diagram



Master Generator MGH7000B Wiring Diagram



Master Generator MGY5000 Wiring Diagram



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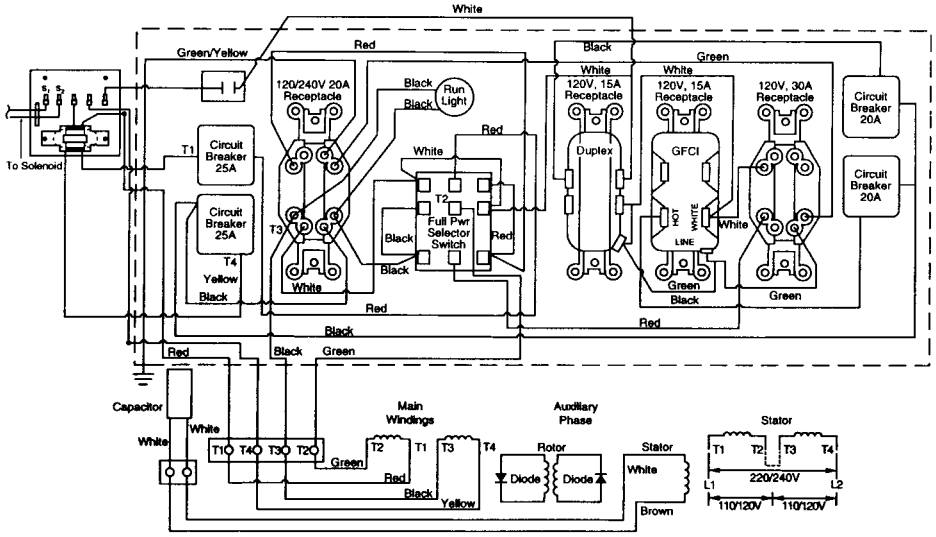
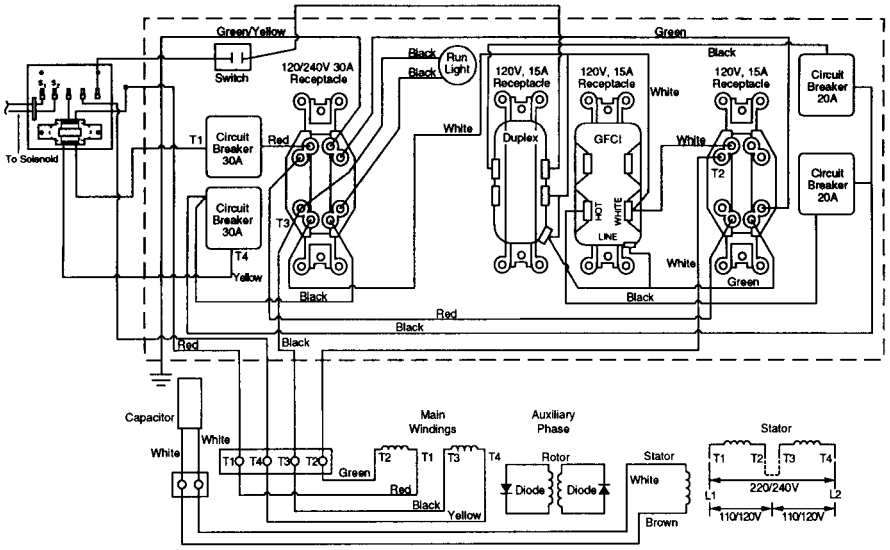
Master Generators w/Auto Idle Wiring Diagram

MGH4000BI,CI • MGH5000BI,CI,CIE • MGH6000BI,CI



Master Generators w/Auto Idle Wiring Diagram

MGH7000BI,CI



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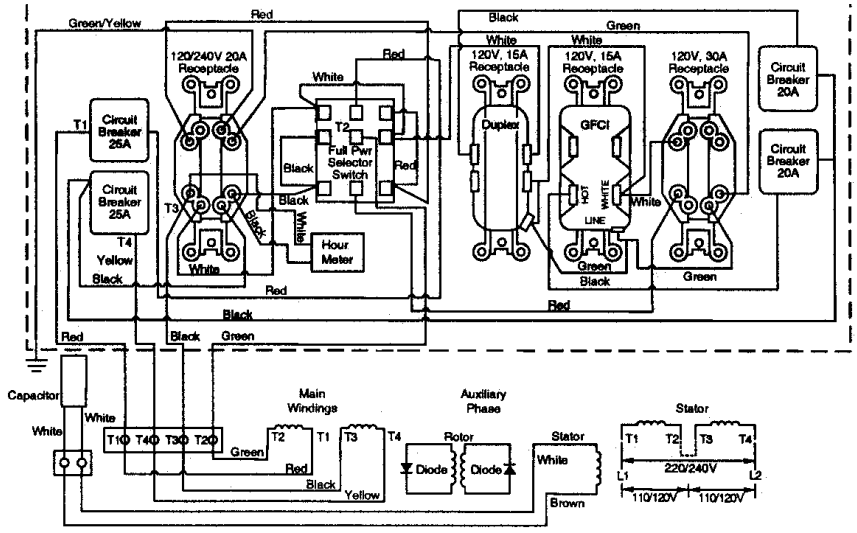
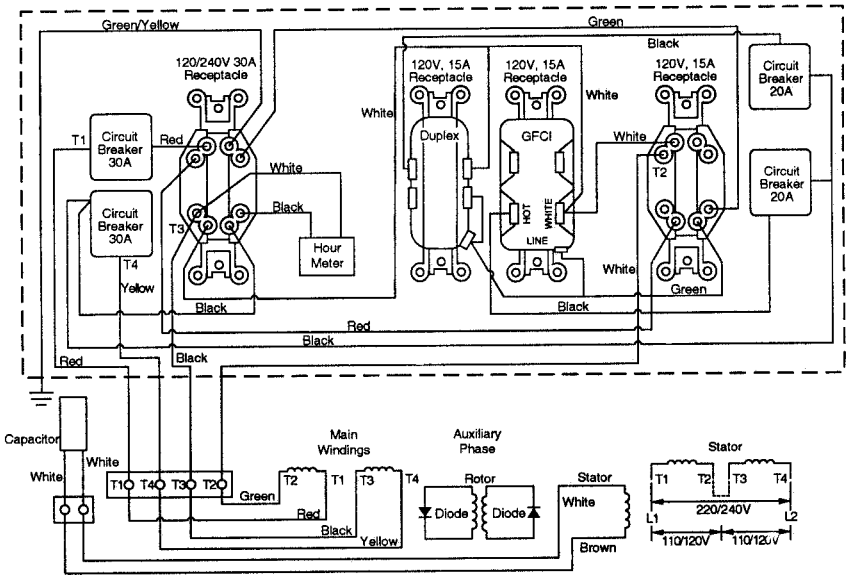
Master Generator Wiring Diagram

MGH4000C, MGH5000C, MGH6000C



Master Generator Wiring Diagram

Model MGH7000C



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Quick Parts Reference

Model#	Alternator	Rectifier/Diodes	Capacitor	Circuit Breaker(s)	Shock Mounts	Auto Idle	Fan	Fuel Tank	Other
HWI3000	099722-01	27001009S (qty 2)	27002002S	22616009	099853-02 (qty 3)	**NA**	27001006	**NA**	Cannot use auto idle Fuel tank not available thru P.H.P.
MGH3000 **MGH3000PR**	099722-02	27001009S (qty 2)	27002002S	22616009	099853-02 (qty 3)	**NA**	27001006	**NA**	Cannot use auto idle Fuel tank not available thru P.H.P.
MGH4000	099723-01	27003012S (qty 2)	27004002S	22616009 (qty 3)	099853-02 (qty 3)	PA2010 (Optional)	27003008	099832-01	099956-01 Full Power Switch 26299000 Lamp
MGH4000A,B, **MGH400C,D**	099723-01	27003012S (qty 2)	27004002S	22616009 (qty 2) 099834-01 (qty 1)	099853-02 (qty 3)	PA2010 (Optional)	27003008	099832-01	101350-01 Hour Meter (if so equipped) 099956-01 Full Power Switch
MGH4000BI,CI, **MGH400CI,DI**	099723-01	27003012S (qty 2)	27004002S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	**100105-01 Board** 100324-03 Solenoid	27003008	099832-01	099956-01 Full Power Switch 26299000 Lamp (MGH4000BI only) 101350-01 Hour Meter (if so equipped)
MGH5000, A, **MGH5000B,C**	099723-02	27003012S (qty 2)	27005003S	2616009 (qty 1) 22616010 (qty 2)	099853-02 (qty 3)	PA2010 (Optional)	27003008	099832-01	099956-01 Full Power Switch 26299000 Lamp 25954000 Gas Cap with Gage
MGH5000D	099723-02	27003012S (qty 2)	27005003S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	PA2010 (Optional)	27003008	107021-01	25954001 Gas Cap with Gage 101350-01 Hour Meter 099956-01 Full Power Switch
MGH5000BI,CI	099723-02	27003012S (qty 2)	27005003S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	**100105-01 Board** 100324-03 Solenoid	27003008	099832-01	099956-01 Full Power Switch 26299000 Lamp (MGH5000BI only) 25954000 Gas Cap with Gage
MGH5000DI	099723-02	27003012S (qty 2)	27005003S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	**100105-01 Board** 100324-03 Solenoid	27003008	107021-01	25954001 Gas Cap with Gage 099956-01 Full Power Switch 101350-01 Hour Meter
MGH6000	099723-03	27003012S (qty 2)	099845-01	2616009 (qty 1) 22616010 (qty 2)	099853-02 (qty 3)	PA2010 (Optional)	27003008	099832-01	26299000 Lamp 099956-01 Full Power Switch 25954000 Gas Cap with Gage
MGH6000B,C	099723-03	27003012S (qty 2)	099845-01	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	PA2010 (Optional)	27003008	099832-01	26299000 Lamp 099956-01 Full Power Switch 25954000 Gas Cap with Gage
MGH6000D	099723-03	27003012S (qty 2)	099845-01	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	PA2010 (Optional)	27003008	107021-01	25954001 Gas Cap with Gage 099956-01 Full Power Switch 101350-01 Hour Meter
MGH6000BI,CI	099723-03	27003012S (qty 2)	099845-01	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	**100105-01 Board** 100324-03 Solenoid	27003008	099832-01	099956-01 Full Power Switch 26299000 Lamp (MGH6000BI only) 25954000 Gas Cap with Gage
MGH6000DI	099723-03	27003012S (qty 2)	099845-01	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	**100105-01 Board** 100324-03 Solenoid	27003008	107021-01	101350-01 Hour Meter 099956-01 Full Power Switch 25954001 Gas Cap with Gage

Quick Parts Reference

Model#	Alternator	Rectifier/Diodes	Capacitor	Circuit Breaker(s)	Shock Mounts	Auto Idle	Fan	Fuel TankOther	
MGH7000	099723-04	27003012S (qty 2)	27007004S	2616009 (qty 1) 22616010 (qty 2)	099853-02 (qty 3)	PA2010 (Optional)	27003008	099832-01	25954000 Gas Cap with Gage 26299000 Lamp
MGH7000B,C	099723-04	27003012S (qty 2)	27007004S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	PA2010 (Optional)	27003008	099832-01	25954000 Gas Cap with Gage 26299000 Lamp 101350-01 Hour Meter (MGH7000C onl
MGH7000D	099723-04	27003012S (qty 2)	27007004S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)		27003008	107021-01	25954001 Gas Cap with Gage 101350-01 Hour Meter
MGH7000BI,CI	099723-04	27003012S (qty 2)	27007004S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	**100105-01 Board** 100324-03 Solenoid	27003008	099832-01	101350-01 Hour Meter (MGH7000CI onl 26299000 Lamp (MGH7000BI only) 25954001 Gas Cap with Gage
MGH7000DI	099723-04	27003012S (qty 2)	27007004S	22616009 (qty 2) 22616010 (qty 2)	099853-02 (qty 3)	**100105-01 Board** 100324-03 Solenoid	27003008	107021-01	25954001 Gas Cap with Gage 101350-01 Hour Meter
MGH10000	102938-01	27003012S (qty 2)	099845-02	22616009 (qty 2) 22616010 (qty 2) 103184-01 (qty 2)	099853-02 (qty 3)	**103257-01 Board** 100324-03 Solenoid	103191-01	099832-01	101350-01 Hour Meter 25954000 Gas Cap with Gage 100366-01 Rocker Switch
MGH10000A	102938-01	27003012S (qty 2)	099845-02	22616009 (qty 2) 22616010 (qty 2) 103184-01 (qty 2)	17529000 (qty 3)	**103257-01 Board** 100324-03 Solenoid	103191-01	079503-25AA	097190-06 Gas Cap with Gage 101350-01 Hour Meter 100366-01 Rocker Switch
MGY5000	099723-02	27003012S (qty 2)	27005003S	2616009 (qty 1) 22616010 (qty 2)	1752900 (qty 2) 099853-02 (qty 1)	**NA**	27003008	099935-01	099804-01 Lamp 099956-01 Full Power Switch 26490000 Ignition Solenoid
MGY5000B	099723-02	27003012S (qty 2)	27005003S	22616009 (qty 2) 22616010 (qty 2)	1752900 (qty 2) 099853-02 (qty 1)	**NA**	27003008	099935-01	099804-01 Lamp 099956-01 Full Power Switch 26490000 Ignition Solenoid
MGY5000C	099723-02	27003012S (qty 2)	27005003S	22616009 (qty 2) 22616010 (qty 2)	1752900 (qty 2) 099853-02 (qty 1)	**NA**	27003008	099935-01	101350-01 Hour Meter 099956-01 Full Power Switch 101103-01 Complete Control Box Assy

Miscellaneous Equipment

This section is compiled of the various types of equipment and parts that are available through PHP. If you ever have a need for a replacement part for the equipment in this section, please feel free to call us toll free at **1-800-362-6951 or e-mail us at techservice@portableheaterparts.com.**

Brand Names Include:
Alto
Electric Eel
Makita
Paragon
Remington
Sure Flame
Telpro
Wap

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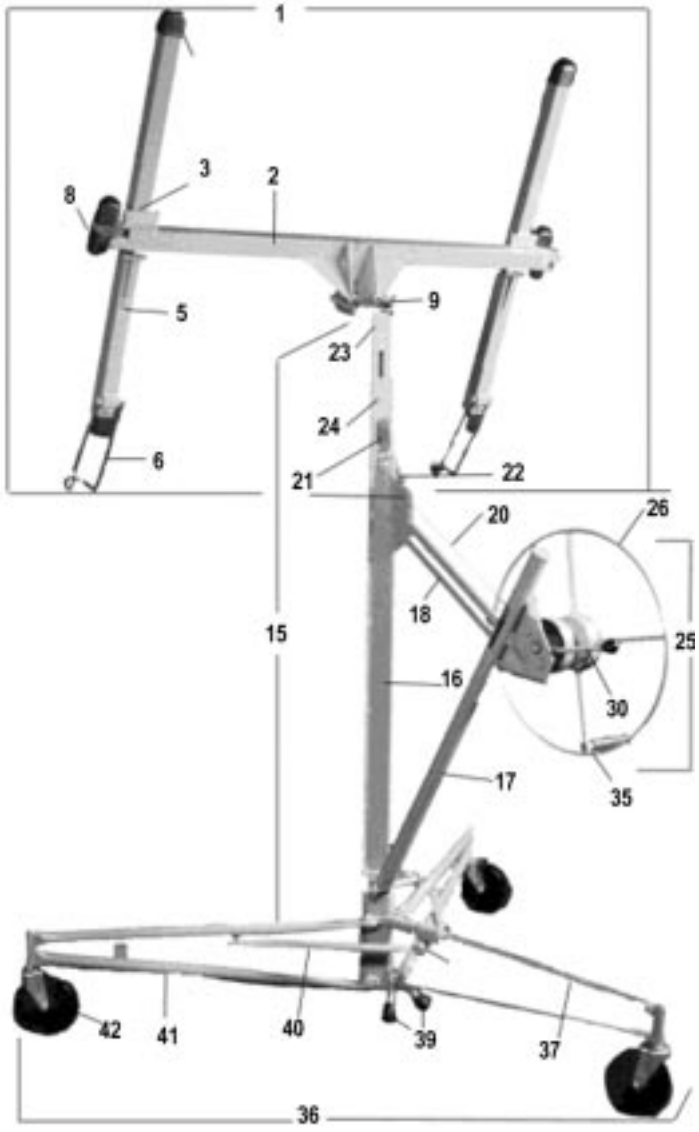
Telpro Drywall Lifter

Model Numbers
138-2

Key No.	Part No.	Description
CRADLE UNIT		
1	01-00	Complete cradle assembly
2	01-01	Cradle body
3	01-02	Pull pin w/ fasteners
4	01-03	Complete cross arm assembly
5	01-04	Cross arm body
6	01-05	Support hook with fasteners
7	01-06	End cap
8	01-07	Outrigger w/ end cap
9	01-17	Complete mounting head assembly
10	01-18	Complete spring yoke pin assembly
FRAME UNIT		
15	02-00	Complete frame assembly w/ winch & standard "A & "B" sections
16	02-01	Frame housing
17	02-02	Winch post w/ pin and fastener
18	02-03	Slide bar w/ pins
20	02-05	Cable 13.5' 1/8" aircraft
21	02-06	Brass sheave w/ axle and pins
22	02-07	Retaining hook
23	02-08	4' "A" section (inner)
24	02-09	4' "B" section w/ sheaves
WINCH UNIT		
25	03-00	Complete winch assembly
26	03-01	Winch wheel w/ bronze flange bearings
30	03-05	Complete brake arm assembly
35	03-10	Red handle
TRIPOD BASE UNIT		
36	04-00	Complete tripod base assembly
37	04-01	Center leg
38	04-02	Tension spring "S"
39	04-03	Backstop tip
40	04-04	Tie arm w/ fasteners
41	04-05	Outer leg w/ fastners
42	04-06	Caster 5"



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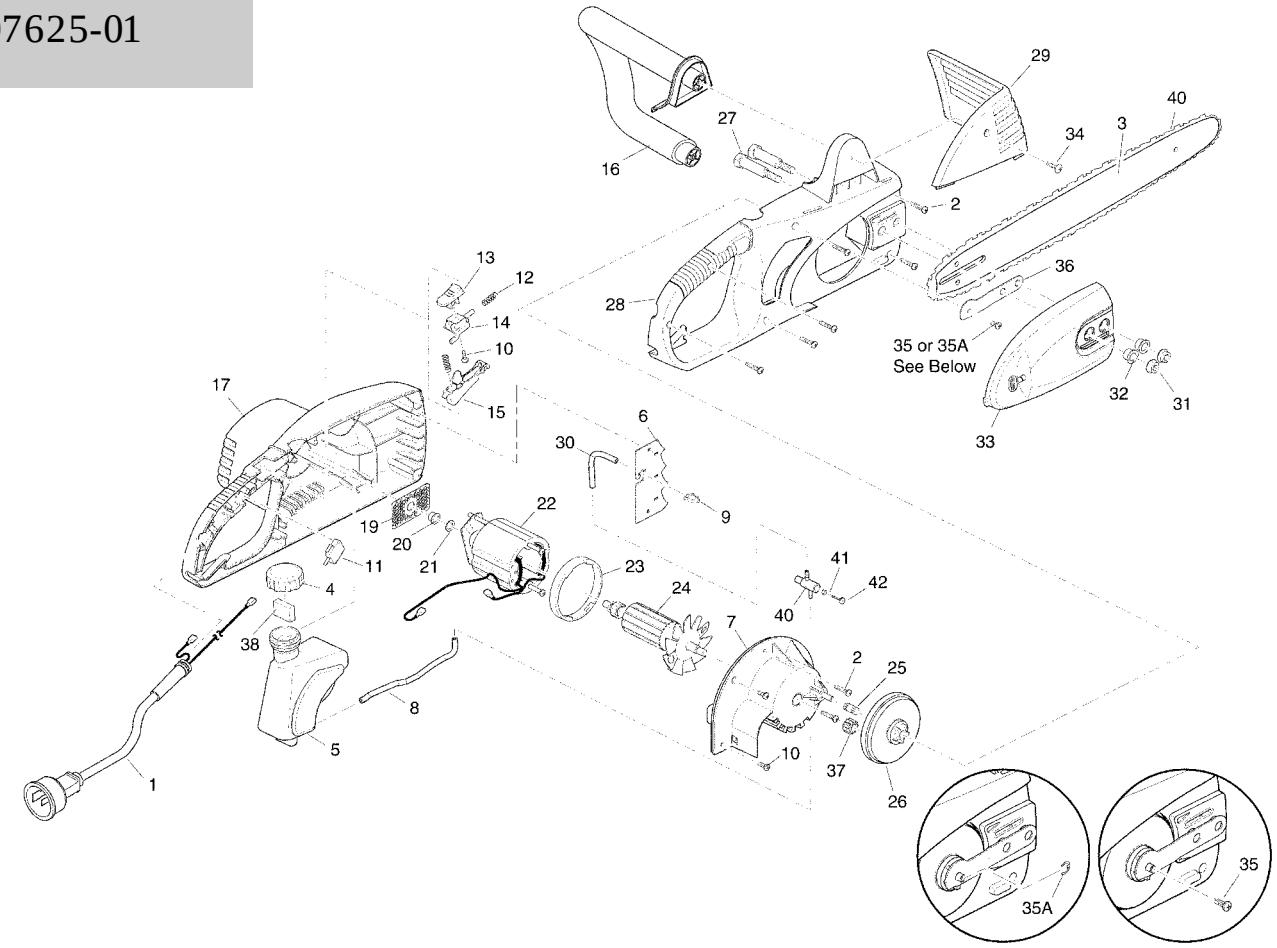
Remington Electric Chain Saw

Model Numbers
107625-01



Key No.	Part No.	Description
1	099829-04	Shrouded Cord
2	107708-01	Screw, PPH B 8-18 x .88 (qty. 8)
3	107704-02	Bar, Guide 16"
4	107610-01	Cap, Reservoir
5	107611-01	Reservoir, Oil
6	107617-01	Plate, Bucking
7	107607-01	Plate, Bearing
8	107719-02	Tubing, .250
9	107721-01	Retainer, Hose
10	107708-02	Screw, PPH B 8-18 x .50 (qty. 4)
11	107729-01	Switch
12	107694-01	Spring, Trigger (qty. 2)
13	107606-01	Lock-Off, Trigger
14	107693-01	Retainer, Lock-Off Trigger
15	107605-01	Trigger
16	107609-01	Handle, Wrap Around
17	107602-01	Housing, Motor
19	059428	Screen, Bearing
20	067987	Bearing, Flanged
21	058059	Washer, Thrust
22	098042-02	Field, 120V
23	108119-01	Ring, Field Support
24	100933-02	Armature, 120V
25	075676	Bearing, Roller Sprocket
26	107713-01	Gear, Sprocket

Key No.	Part No.	Description
27	107707-01	Mounts, Guide Bar (qty. 2)
28	107603-01	Cover, Side
29	107608-01	Guard, Hand, Front
30	107719-01	Tubing, .250
31	107710-01	Nut, Guide Bar (qty. 2)
32	107711-01	Bushing, Sprocket Cover (qty. 2)
33	108641-02	Assembly, Sprocket Cover [Includes: (107728-02) Block, Adjusting; (109706-01) Screw, Thumb Tension; (109708-01) KlipRing, 1/4"; (107604-01) Cover, Sprocket]
34	109701-01	Screw, Truss Head
35	076905	Screw, Shoulder Pan - HD
35A	108120-01	E-Ring
36	107615-01	Support, Sprocket
37	059606	Gear, Drive IIT 20DP
38	107730-01	Filter, Oil Reservoir
39	091375-02S	Chain, Saw (16"), Bulk Pack
40	107595-01	Body, Pump
41	107700-01	Spring, Large Pump
42	108186-01	Assembly, Cam Follower

PARTS AVAILABLE - NOT SHOWN

079963-04 Scabbard

107705-01 Owner's Manual

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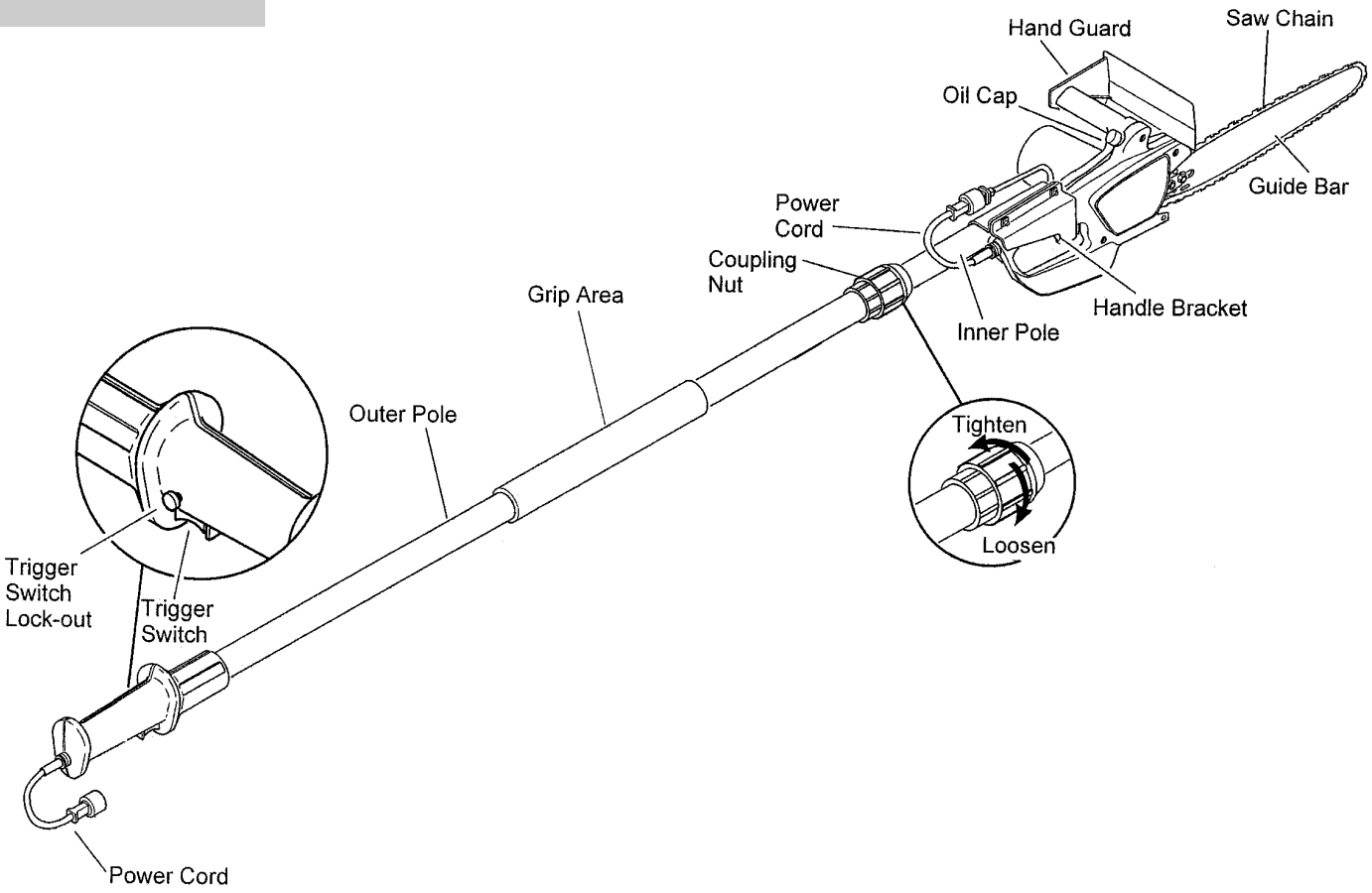
Remington Polesaw

Model Numbers
104317



Part No.	Description
104301S	Chain
077525S	Switch
107481-01	Armature (fan)
075837	Field
075676	Sprocket Roller Bearing
107713-01	Sprocket Gear (nylon)
059606	Drive Gear (metal)
079084-01	Oil Cap
077115	Adjustment Plate Assembly
076647	Holder/Brush Assembly
110731-01	Pole
107551-01	Bracket
104302-015	Guide Bar
108639-01	Oil Reservoir and Cap Assembly
108626-01	Handguard
110731-01	Pole & Coupling
107551-01	8” Hardware/Bracket
079882-01	10” Hardware/Bracket

*Powercord replaced with pole only

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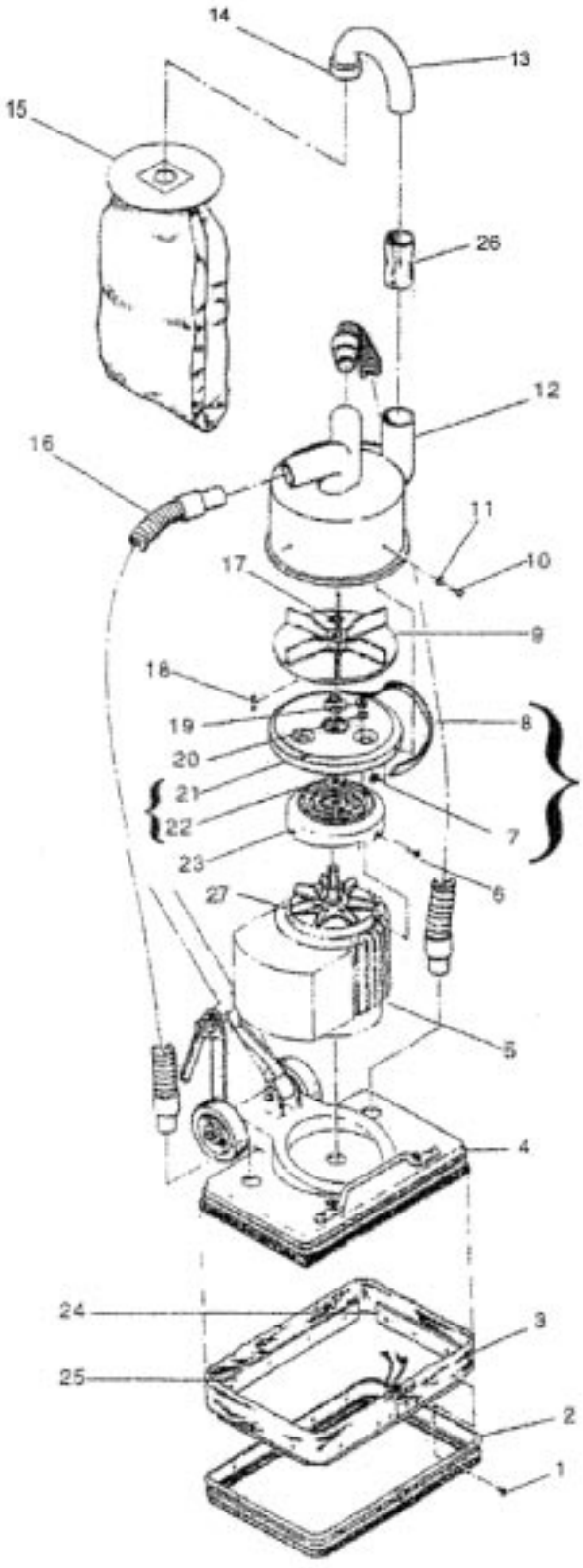
Clarke Electrical Orbital Sander

Model Numbers
OBS18DC

Key No.	Part No.	Description
1	930124	Rivet 3/16 x 19/32 (qty. 16)
2	38239A	Skirt, OBS-18
3	38015A	Shroud, Housing
4	25908B	Mainframe
5	44671A	Motor, 1HP TFFC 115V/60Hz
5	44673A	Motor, 1 HP 230V/60Hz
6	87700A	Screw, 1/-20 x 1/2 (qty. 3)
7	80092A	Insert, Threaded, 10-32UNF (qty. 4)
8	34287A	Gasket, Cover
9	54765A	Fan
10	85383A	Screw, 10-32 x 3/4 (qty. 4)
11	980982	Washer, #10 Plain (qty. 4)
12	35242A	Housing, Blower
13	53644A	Elbow
14	837304	O'Ring
15	Ref.	Bag Dust (See Accessories)
16	30407B	Hose (qty. 2)
17	797301	Ring, Retaining 5/8 Ext (qty. 2)
18	915044	Key, 3/16 Sq. x 1
19	81217A	Nut, 1/-20 (qty. 3)
20	980646	Washer, 1/4 Plain (qty. 3)
21	32404A	Cover, Blower Housing
22	87617A	Washer, Felt 1/2 x 11/4 x 1/4
23	50275A	Fan Cover (OBS-18DC)
24	68806A	Weight, Skirt 103/4
25	68807A	Weight, Skirt 17
26	38109A	Seal, Dust Pipe (qty. 2)
27	40545A	Motor Fan
28	10478A	Asm., Blower Housing Cover (includes 7, 8, 21 & 22)

Accessories

70401A	Paper Dust Bag (2 per)
50951A	Cloth Dust Bag
976550	12 x 18 White Pad (20 per)
50712A	Paper Dust Bag w/Bun



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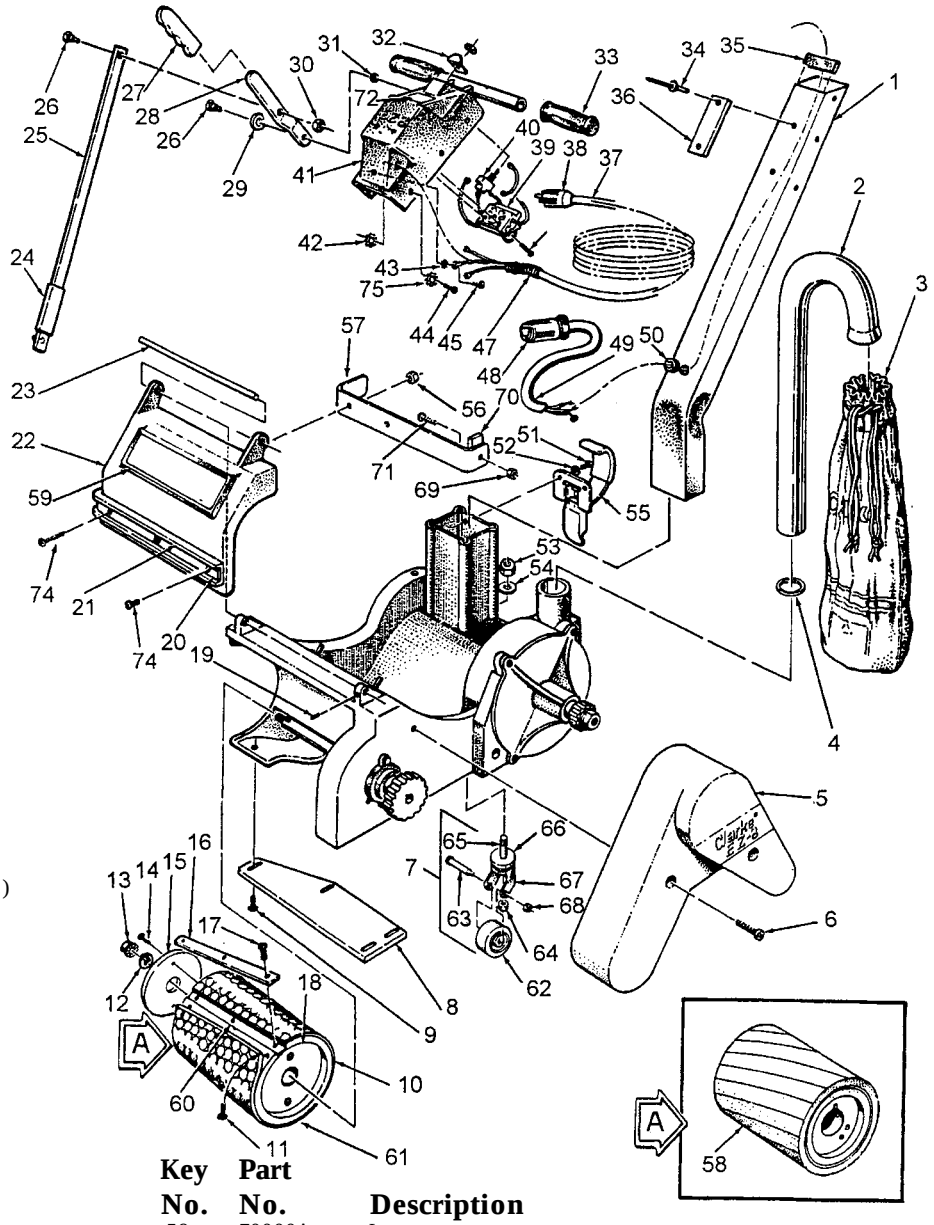
Clarke 8” Drum Sander by Alto

Model Numbers
7057A



Key No.	Part No.	Description
1	69106B	Tube, Handle
2	69107A	Tube, Dust
3	50951A	Bag, Dust
4	68285A	Support Tube
5	23807B	Guard, Belt
6	962988	Screw 1/4-20 x 1-1/4 (qty. 2)
7	52125A	Caster Asm. Complete
8	67612A	Shoe, Dust
9	962826	Screw 10 - 24 x 3/8 (qty. 4)
10	32364A	Cover, Drum
11	962823	Screw 1/4 - 20 x 1/2 (qty. 13)
12	65310A	Key, Washer
13	920365	Nut 1/2 - 13 Nylock (qty. 3)
14	85313C	Screw 6-32 x 3/8 (qty. 4)
15	68613A	Plate, End
16	162007	Clamp, Paper
17	962733	Screw 12 - 24 x 1 (qty. 3)
18	62711A	Drum, Clamp Style
19	962170	Screw Set 10 - 24 x 1/4
20	66948A	Retainer, Bumper
21	31223A	Bumper, Front
22	22123B	Cover, Front
23	64469A	Handle, Front
24	61659A	Collar
25	65706A	Link, Control
26	960952	Bolt, Shoulder 3/8 x 3/8 (qty. 2)
27	34609A	Grip, Lever
28	65618A	Lever, Control
29	980022	Washer, Wave
30	920110	Nut 5/16 - 18 ESNA
31	980645	Washer 3/8 SAE (qty. 2)
32	63928A	Guard, Switch
33	34610A	Grip, Handle (qty. 2)
34	930093	Rivet 1/8 (qty. 2)
35	97100A	Trim, Vinyl, Black
36	74052A	Plate Safety
37	42183A	Cord Set, Power 115V 1
	42184A	Cord Set, Power 230V 1
38	911248	Plug 5-15P
39	41807A	Contractor
	41808A	Contractor 230V
40	47387A	Switch, Control
41	24525B	Housing Control
42	81210A	Nut, Fixture 3/8 PT
43	980675	Washer
44	962677	Screw 10 - 24 x 3/4 (qty. 6)
45	962826	Screw 10 - 24 x 3/8
47	337504	Relief, Strain
48	911461	Adapter L5 - 15R
49	41948A	Cord, Interconnect
50	51523A	Relief, Strain
51	962094	Screw 1/4 - 20 x 3/8 (qty. 2)
52	170892	Washer, 1/4 Lock (qty. 2)
53	920196	Nut, 1/2 - 13 Jam
54	980648	Washer 1/2
55	55711A	Latch
56*	920296	Nut #10 ESNA (qty. 2)
57*	69098A	Wear, Strip
58*	22603A	Drum Expansion

Key No.	Part No.	Description
59	70000A	Logo
60	65103A	Insert (qty. 3)
61	13507A	Asm., Drum, Clamp includes 10, 18, 11, 14, 15, 16, 17 & 60
62	59960A	Wheel Caster
63	80012A	Bolt, Shoulder 5/16 x 1-1/2
64	81307A	Nut, 7/16 - 14 Jam
65	67468A	Shaft, Caster
66	51194A	Bearing, Caster (qty. 2)
67	29405A	Yoke, Caster
68	920284	Nut, 1/4 - 20 ESNA
69*	81217A	Nut, 1/4-20 x .218H Nylk. (qty. 2)
70*	60906A	Block, Wear (qty. 2)
71*	962505	Screw, 1/4 - 20 x 5/8 (qty. 2)
72*	77299A	Label, Caution
74	85517A	Screw, 10 - 24 x 1/2 PN-SB (qty. 5)
74*	85517A	Screw, 10 - 24 x 1/2 PN-SB (qty. 3)
75	980603	Washer, #10 Lock Ext. Th.

*Note: Equipped on sleeve units only

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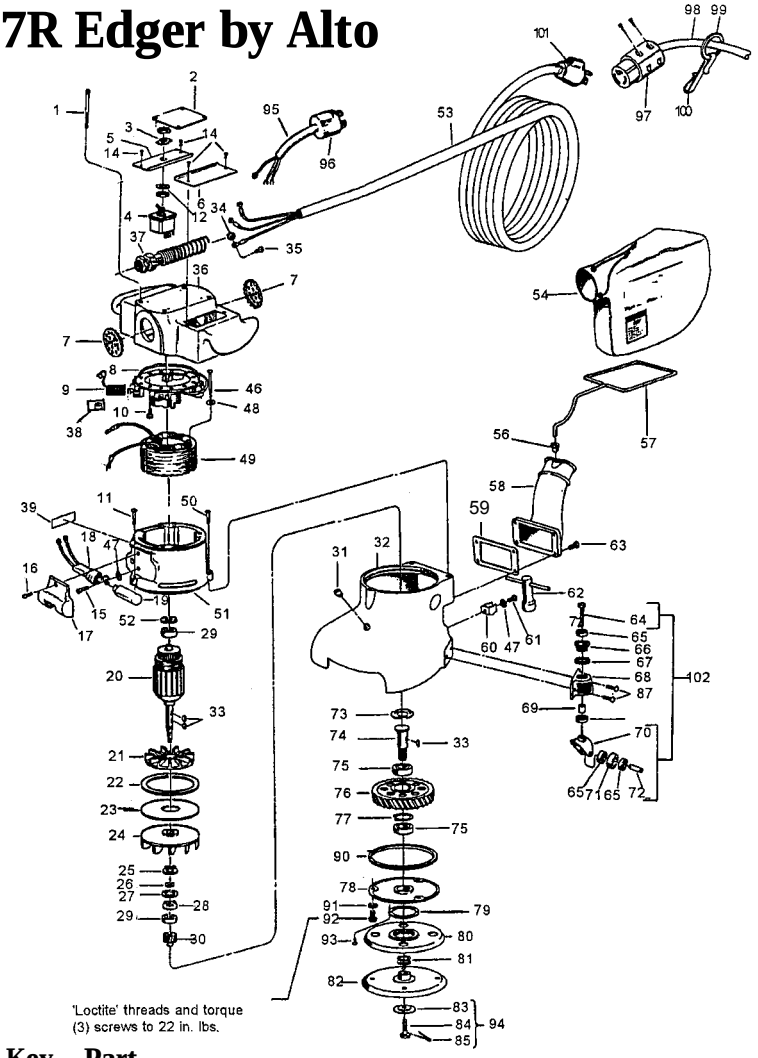
Clarke Super 7R Edger by Alto

Model Numbers
7075A



Key No.	Part No.	Description
1	962404	Screw - #10 - 24 x 3-1/4 Ft. St. Mach. (qty. 4)
2	70054A	Plate - Name
3	646302	Plate - Dial
4	47394A	Switch - Toggle
5	302310	Cover, Motor Brush R.H.
6	302309	Cover, Motor Brush L.H.
7	306802	Plug - Vent (qty. 2)
8	43201A	Holder Assembly Brush
9	40818A	Brush (qty. 4)
10	962727	Screw - #8 - 32 x 1/2 Pan Head (qty. 4)
11	962988	Screw 1/4 - 20 x 1-1/4 Pan St. Mach.
12	980662	Washer - SH #1224-00 Lock
14	962545	Screw #6-32 x 3/8 Ft. St. Type 23 (qty. 4)
15	85393A	Screw #10 - 24 x 1/4 Pan St. Mach.
16	962310	Screw - #10 - 24 x 1/2 OV
17	303602	Guard - Lamp
18	46902A	Socket - Assembly
19	911113	Bulb - Light 15W Clear
20	10101B	Armature Assembly w/fan
21	303004	Fan - Motor
22	293403	Gasket - Fan Baffle
23	306102	Plate - Exhaust Fan Baffle
24	303002	Fan - Vacuum
25	307302	Ring - Retaining
26	308202	Spacer - Bearing
27	297604	Seal - Oil
28	407302	Ring - Retaining
29	902567	Bearing (qty. 2)
30	293514	Pinion - Armature
31	316804	Plug - Pipe 1/8
32	304204	Housing - Gear
33	915028	Key 1/8 x 5/8 Woodruff (qty. 3)
34	980621	Washer, #1108
35	962550	Screw, 8 - 32 x 5/16
36	302312	Cover - Handle Assembly Polish
37	467504	Strain Relief
38	50932A	Spring Brush Holder (qty. 4)
39	73285A	Label, Warning
46	962211	Screw 10 - 24 x 2-1/2 Pn. St. Mach. (qty. 2)
47	980603	Washer - #1110 Shakeproof (qty. 7)
48	980643	Washer - #10 7/16 Plain
49	42820A	Field Assembly
50	962454	Screw 1/4 - 20 x 1 Sc. Cap (qty. 2)
51	304208	Housing and Guard Assembly
	20013A	Housing, Motor Super 7R
52	298306	Spring Load
53	42018A	Cord Assembly, 115V
54	50952A	Bag, Dust
56	50732A	Bearing
57	69621A	Support, Bag
58	21108A	Bracket - Exhaust
59	293406	Gasket - Exhaust Bracket
60	302101	Clamp - Wrench
61	962987	Screw - 10 - 24 x 3/8 Pn. St. Typ.
62	987300	Wrench
63	962289	Screw - 1/4 - 20 x 3/4 Soc. St. Cap (qty. 4)
64	85702A	Screw - 1/4 - 20 x 1-3/4
65	50740A	Bearing (qty. 8)_
66	960130	Screw - Caster Adjusting (qty. 2)
67	920670	Nut - Lock Adjust (qty. 2)
68	310803	Bracket - Caster Support (qty. 2)
69	298215	Spacer - Collar (qty. 2)
70	29404A	Yoke, Edger, Caster (qty. 2)
71	299704	Roller - Caster
72	925592	Pin - 1/4 x 1 Spirol (qty. 2)

Key No.	Part No.	Description
73	318303	Spring - Load
74	307702	Shaft - Drive Gear
75	902550	Bearing (qty. 2)
76	303502	Gear - Drive
77	067304	Ring - Retaining
78	302306	Cover - Assembly Gear Housing
79	317204	Retainer - Disc Guard
80	293616	Guard - Disc
81	980088	Washer (qty. 2)
82	13203A	Assembly - Sanding Pad
83	980132	Washer - Disc, Retaining
84	960140	Screw - Paper Lock
85	925004	Pin - Cotter 1/16 x 1/2
87	962109	Screw - #10 - 24 x 5/8 Pn SS (qty. 4)
90	34232A	Gasket - Gear Case Cover (qty. 4)
91	87609A	Washer Seal (qty. 3)
92	84808A	Screw, 10 - 24 x 3/4 (qty. 3)
93	962974	Screw, 6 - 32 x 1/2 (qty. 4)
94	960125	Assembly Screw Lock
95	41947A	Cord Interconnect 240V
96	45602A	Plug 240V
97	41708A	Connector 240V
98	42182A	Cord Assembly Power 240V
	40007A	Cordset, 50' w/AU1-10P
99	57809A	Ring
100	54812A	Hook
101	911248	Plug 115V
102	12208A	Caster Assembly (qty. 2)
*	31407A	Case, Super 7R Edger

*Not illustrated

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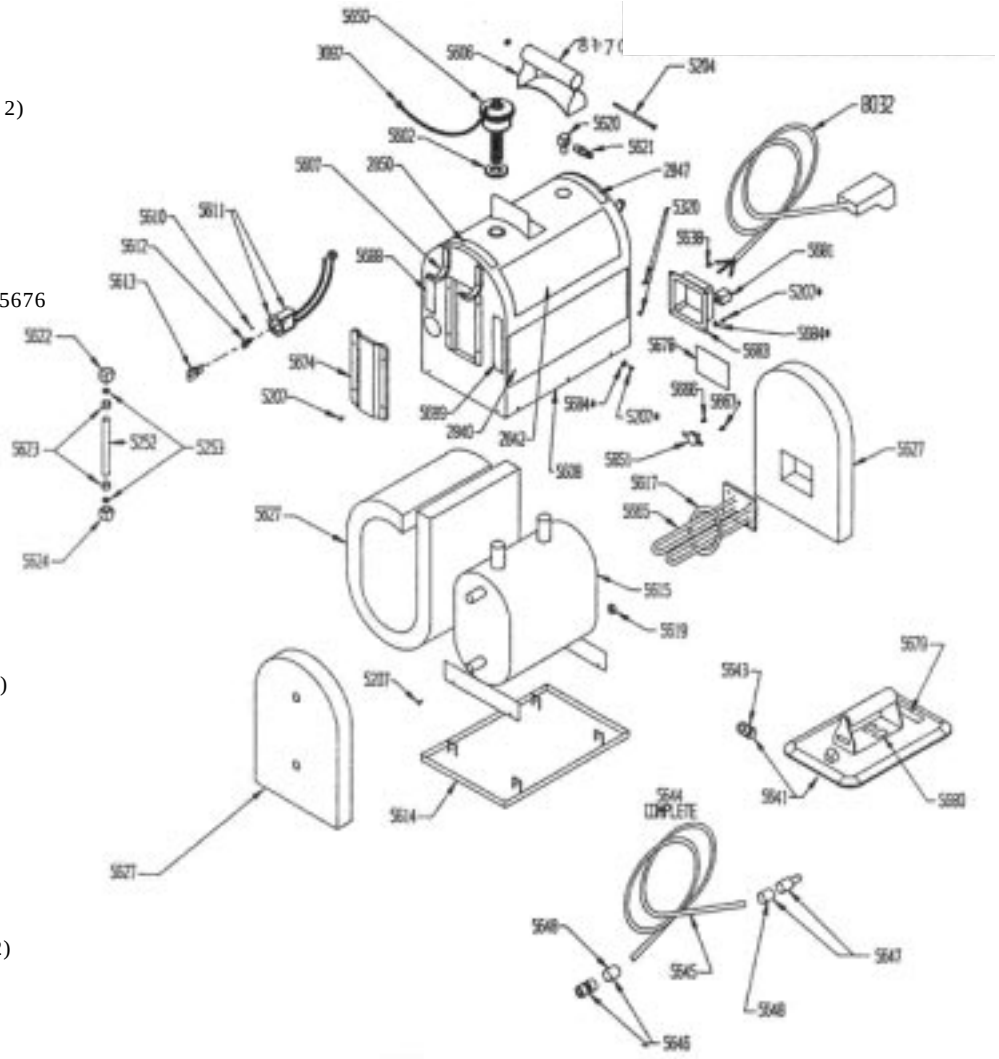
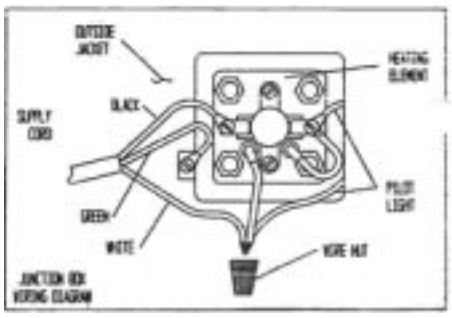
Warner Wallpaper Steamer

Model Numbers
5687

Part No.	Description
2840	DECAL -INSAFETY INSTRUCTION (qty. 2)
2842	DECAL CAUTION (qty. 2)
2843	Operating Guide
2847	DECAL ELETRICAL HAZARD
2850	DECAL -INSTEAM BURNS-IN
3097	LANYARD-12-IN CBL CONN. WT.
3100	Serial # Decal on Junction Box
3673	DECAL -IN UNPLUG BEFORE FIL
3677	STEAMER CONVERSION FOR MODEL 5676
3719	DECAL AVOID SCALDING
3722	DECAL -INHOT-IN (qty. 6)
3755	RENTAL WINDOW BANNER
5204	BOLT & NUT 3/16X5 STOVE (qty. 2)
5207	SCREW #8X3/8-IN PHILLIPS (qty. 36)
5252	GAUGE GLASS W/ GASKETS
5253	GASKET F/WATER GLASS (qty. 2)
5320	Ground Terminal Screw w/Nut (3/16" x 3/8" Stove Bolt)
5500	DECAL SET
5512	Rental Blanks
5602	GASKET FOR WEIGHTED CAP
5606	BRACKET F/ CARRYING HANDL
5607	Accessory Hooks
5608	ORANGE JACKET WITH DECALS
5610	SCREW, 2 X 3/16 SELF TAPPING (qty. 2)
5611	PILOT LIGHT SOCKET
5612	PILOT LIGHT BULB
5613	CAP FOR PILOT LIGHT
5614	BOTTOM TRAY W/MTN BRACKET
5615	WATER TANK(STAINLESS STL)
5617	GASKET F/HEATING ELEMENT
5619	Brass Nut, 3/8" x 16" (qty. 4)
5620	ELBOW STEAM OUTLET
5621	HOSE CON.STEAM OUTL 267
5622	ELBOW,UPPER WATER GAUGE
5623	NUT F/WATER GAUGE ELBOWS (qty. 2)
5624	ELBOW,LOWER WATER GAUGE
5627	INSULATION,STEAMER TANK
5629	THIN LINE STEAM PAN
5630	HOSE CONNECTOR /NARROW PA
5638	Wire Nut for Supply Cord
5641	STANDARD STEAM PAN
5642	* GO_TO_5641
5643	HOSE CONNECTOR STEAM PAN
5644	STEAM HOSE W-CONNECTORS
5645	STEAM HOSE W/O CONNECTORS
5646	HOSE CONN. W/CLAMP
5647	HOSE CONNECTOR
5648	HOSE CLAMP 3/8-IN (qty. 2)
5650	WEIGHTED CAP
5651	Thermostat
5665	ELEMENT W/THERMOSTAT
5667	TERMINAL SCREWS, 8-32 X 3/16-IN (qty. 2)
5668	Red Jumper Wire with Insulating Sleeve
5669	White Jumper Wire with Insulating Sleeve
5670	Insulating Sleeve (qty. 2)
5674	PLASTIC WATER GAUGE SHLD
5681	GROMMET TO ELECT CORD 279
5683	Cover Plate to Junction Box
5684	Sems, Screw and Lock Washer (qty. 2)
8032	ELEC CORD 15'X 14/3 GFCI
8170	Handle





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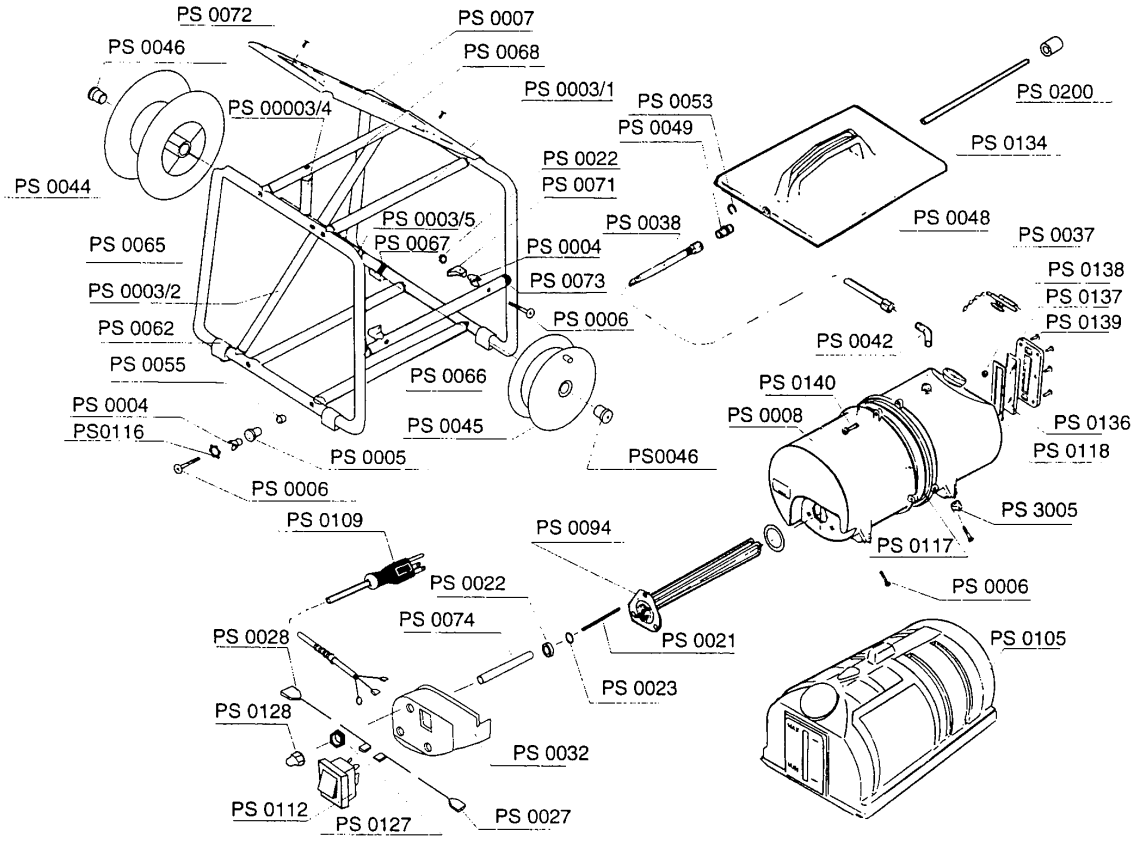
Earlex SteamMaster Wallpaper Steamer

Model Numbers
LMB150



Part No.	Description
PS0003/1	Cross Tube
PS0003/2	Diagonal Tube
PS0003/4	Vert. Tube-Reel Support
PS0003/5	Diag. Tube-Reel Support
PS0004	Tube Connector External
PS0005	Tube Connector Internal
PS0006	C/SK Screw Frame Joints
PS0007	Stand Seat Moulding
PS0008	Complete Tank Assembly
PS0019	Thermal Fuse
PS0020	Sealing Ring For Element
PS0021	Stud
PS0022	Hexagon Nut
PS0023	Shakerproof Washer
PS0027	Cable Assembly To Cut Out
PS0028	Cable Assembly To Element
PS0032	Element Cover
PS0035	Nylon Dome Nut
PS0036	C/SK Screw Tank To Frame
PS0037	Pressure Cap With Chain
PS0038	Steam Hose Assembly
PS0042	Elbow Steam Outlet
PS0044	Reel For Steam Hose
PS0045	Reel For Mains Cable
PS0046	Endplug For Reel Retention
PS0047	Complete Steamplate
PS0048	Steamplate Plastic Pan
PS0049	Adaptor For Hose
PS0055	Taper Nut
PS0062	Foot Moulding
PS0064	End Frame Tube-Window End

Part No.	Description
PS0065	End Frame Tube-Mains End
PS0066	Cross Tube Mounting
PS0067	Horiz. Tube-Reel Support
PS0068	Cross Tube-Stand/Seat
PS0071	Steamplate Locator Clip
PS0072	Seat/Stand Retention Clip
PS0073	Cross Tube Steamplate Loc
PS0077	Insulating Sleeve
PS0094	1500 Watt Element
PS0105	Grey Tank Cover
PS0109	Electric Cord 16FT
PS0112	Mains Switch
PS0116	Washer
PS0117	Gasket For Tank
PS0118	Gasket For Sight Window
PS0123	Thermostat
PS0127	Hexagon Nut
PS0128	Stud Cap
PS0134	Stainless Steam Pipe
PS0136	Glass For Window
PS0137	Retaining Plate For Window
PS0138	Red Sight Ball
PS0139	Screws For Retaining Plate
PS0140	Bolts For Tank
PS0181	Decal Tank
PS0181	Pan Decal Pan
PS0200	Steamplate Buffer
PS0202	Swivel Adaptor
PS0253	Complete Pan

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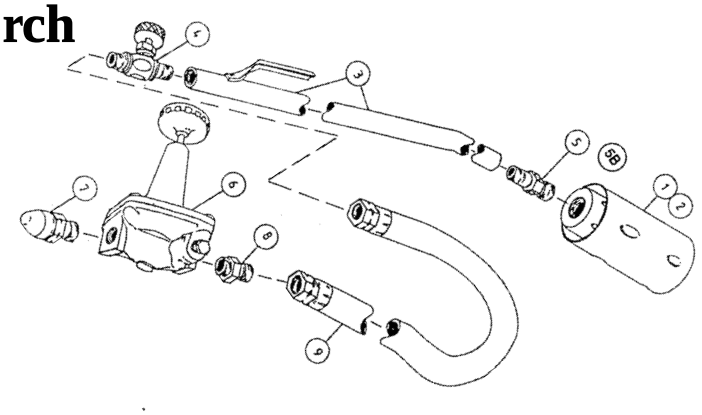
Torches

Sure Flame ST2 and ST3 Torch

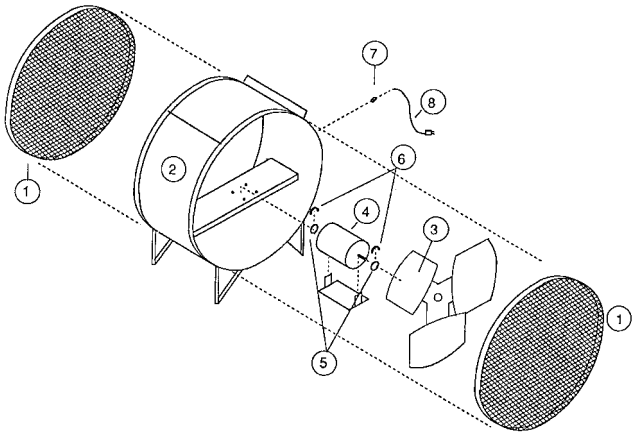


Key No.	Part No.	Description
1	30BV1P	ST2 Sure Flame Burner
2	33BV3P	ST3 Sure Flame Burner
3	12S01P	Torch Handle
4	12S02P	Gas Valve
5	12S03P	Burner Orifice (ST-2)
5	12S04P	Burner Orifice (ST-3)
6	597FB	Regulator (Optional)
7	30S07P	POL Fitting
	G1690	POL if regulator is used
8	30S08P	Hose Coupling for regulator
9	2510LH	1/4" x 10' Hose Assembly
10	2525LH	1/4" x 25' Hose Assembly

Weed Dragon Torch Kit - VT2-23C

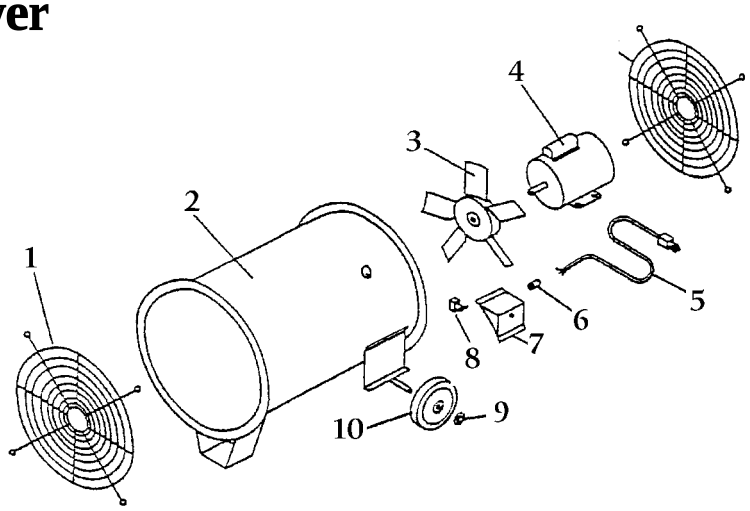
Part No.	Description
HP-10	10' UL Listed Hose
PW-795	Hand Tight POL Fitting
V-3055	Adjusting Needle Valve
R-700C	Regulator
L-2001	Spark Lighter w/flints

Sure Flame Model FN 20P



Key No.	Part No.	Description
1	FN20-51P	Fan Guard
2	FN20-53P	Fan Housing
3	FS2422P	20” Fan Blade
4	FS2431P	1/2 HP 115V 1725 RPM Electric Motor
5	FS5665P	Rubber Motor Mount
6	FS5962P	Motor Mount Base Clamp Kit
7	SC5508P	3/4 Strain Relief Connector
8	HC1020P	Power Cord 24 inch

UB181P Utility Blower



Key No.	Part No.	Description
1	FS6611P	Fan Guard
2	FSUB-1705P	Housing Assembly w/o Wheels
3	FS6609P	Fan Blade
4	HM1166P	1HP, 115V, 1725 RPM Motor
5	HC1020P	Power Cord
6	FS5844P	7/8” Strain Relief Bushing
7	FSUB-1503P	Switch Box
8	HC1011P	20 Amp Toggle Switch
9	FS6330P	1/2” Push Nut
10	HW1164P	8” Semi Pneumatic Wheel
OPTIONAL ACCESSORIES NOT SHOWN		
	FDFA-18P	UB18 18” Duct Transition
	FSUB-1706P	UB18 16” Duct Transition
	FSUB-1707P	UB18 12” Duct Transition
	DU1825NHP	Duct-18”x25’ w/o holes

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Makita Power Cutter

Model Numbers
DPC7301
DPC7300

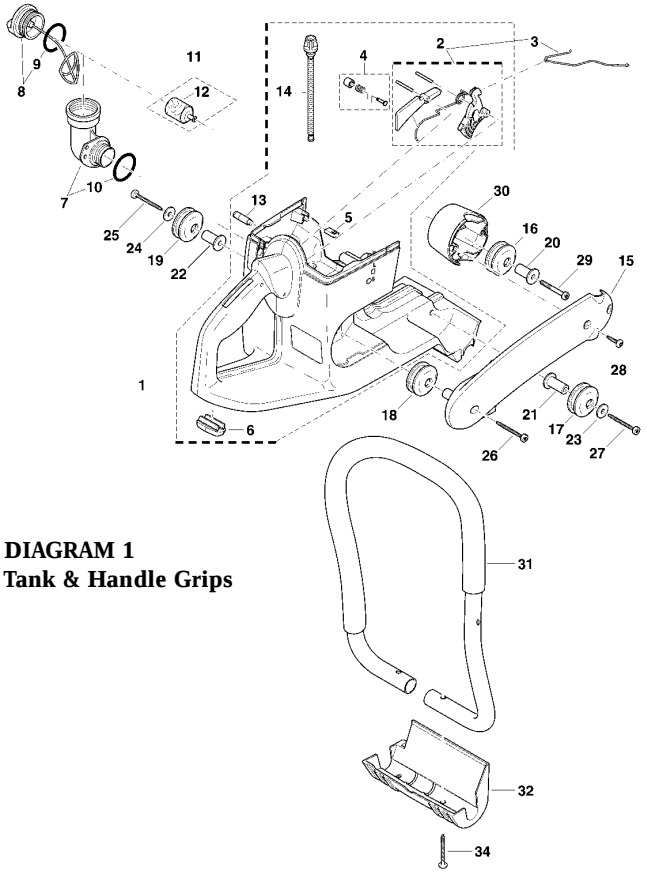

DIAGRAM 1
Tank & Handle Grips

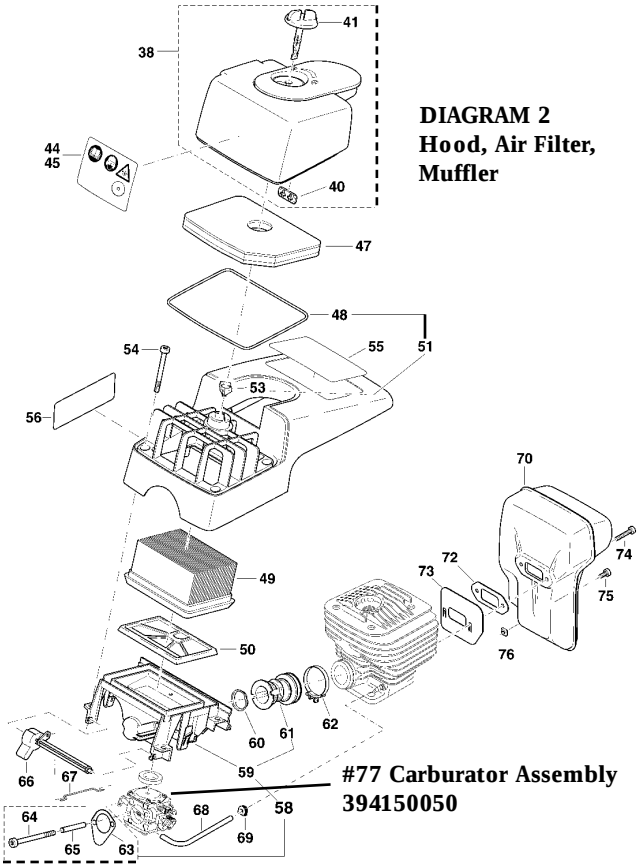

DIAGRAM 2
Hood, Air Filter, Muffler

#77 Carburator Assembly
394150050

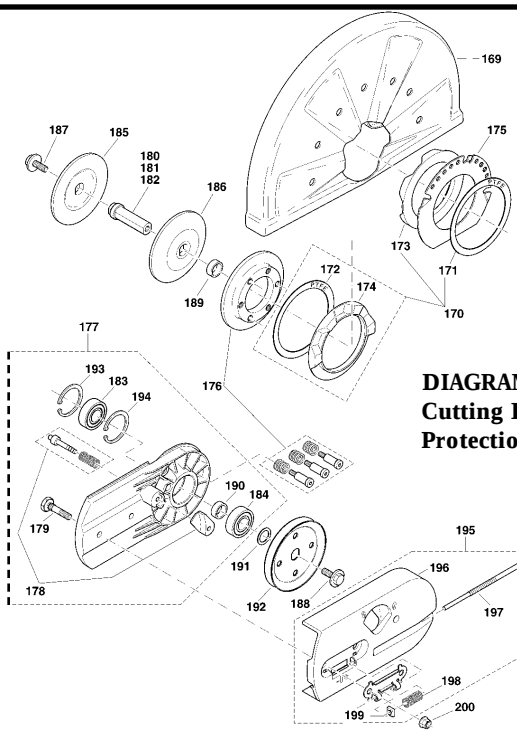

DIAGRAM 3
Cutting Device, Protection Hood

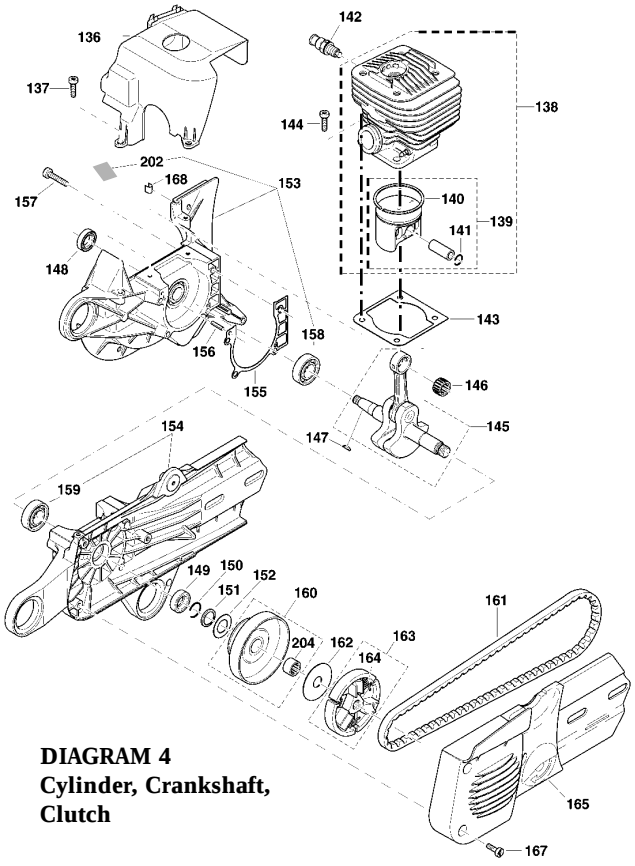

DIAGRAM 4
Cylinder, Crankshaft, Clutch

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Makita Power Cutter

Key No.	Part No.	Description
DIAGRAM 1		
1	394114601	Tank cpl., blue
2	957117020	Throttle mechanism, cpl.
3	394117011	Throttle linkage
4	957117030	Half-throttle lock, cpl.
5	394114100	Screw plug (qty. 4)
6	394114070	Rubber foot
7	010114081	Angular union assy.
8	010114091	Tank cap cpl.
9	963230031	O-Ring, red
10	963230031	O-Ring, red
11	963601130	Suction head
12	963601240	Felt
13	010175050	Air valve cpl.
14	965404911	Fuel line
15	394114640	Bracket, grey
16	965403532	Rubber buffer
17	965403532	Rubber buffer
18	965403532	Rubber buffer
19	965403532	Rubber buffer
20	394114031	Axle
21	394114031	Axle
22	394114031	Axle
23	924405500	Washer
24	924405500	Washer
25	913455454	Screw
26	913455454	Screw
27	913455454	Screw
28	913455204	Screw (qty. 2)
29	908305405	Screw
30	394114050	Pot, grey
31	394310100	Wrap around handle
32	394114060	Foot
34	913455454	Screw (qty. 2)
DIAGRAM 2		
38	394118070	Filter cover assy., grey
40	394118060	Insert, black
44	980114611	Safety label
45	980114755	Safety label
47	394173030	Prefilter
48	394118020	Packing ring
49	394173010	Air filter
50	394173020	Inner filter
51	394118041	Hood cpl., grey
53	394118050	Bayonet lock
54	908505555	M5x55 Screw
55	980114610	DPC 7300 Label
55	980114498	DPC 7301 Label
56	980114762	Label
58	957171394	Modification set connecting sleeve
59	394171050	Connecting sleeve cpl.
60	024131031	Insert for suction hose
61	394131100	Suction line
62	965603050	Hose clip
63	965518120	Gasket
64	908204555	M4x55 Screw (qty. 2)
65	970502050	Tube
66	394150030	Choke shaft
67	394150042	Choke shaft
68	965452380	Tube
69	965401016	Rubber bush
70	394174010	Muffler
72	965531130	Gasket
73	394174050	Cover plate
74	908405205	M5x20 Screw (qty. 2)
75	908005095	M5x9 Screw
76	921905004	Square nut
77	394150050	Carburator Assembly

Key No.	Part No.	Description
DIAGRAM 3		
169	325341610	12" Prot. hood, silver
169	394341010	14" Prot. hood, silver
170	957342011	Prot. hood mounting, cpl.
171	394342111	Sliding disc
172	394342111	Sliding disc
173	965404900	Rubber ring ext.
174	965404920	Rubber ring int.
175	394342011	Locking plate
176	394342201	Pressure ring cpl., grey
177	394211110	Cutting device assy., grey
178	957211020	Bolt cpl.
179	394211090	Screw (qty. 2)
180	394228100	Axle
181	394228110	Axle
182	394228130	Axle
183	960102176	Ball bearing
184	960102176	Ball bearing
185	394228061	Pressure disc
186	394228061	Pressure disc
187	994280250	M8x25 Hexagonal screw
188	994280250	M8x25 Hexagonal screw
189	394228020	Spacer
190	394228020	Spacer
191	900006179	Disc
192	394221010	V-belt pulley
193	929240180	Snap ring
194	929240180	Snap ring
195	394211100	Cover cpl., grey
196	394211020	Cover, grey
197	394213031	Tensioning screw
198	394342120	Spring
199	921906004	M6 Square nut
200	923208004	M8 Hexagonal nut (qty. 2)
DIAGRAM 4		
136	394131040	Hood, black
137	908005165	M5x16 Screw (qty. 3)
138	394130012	Cylinder/piston, cpl.
139	394132110	Piston cpl.
140	394132020	Piston ring
141	119132060	Spring ring (qty. 2)
142	001131150	Decompression valve
143	965531120	Gasket
144	908005205	M5x20 Screw (qty. 4)
145	394120010	Crankshaft cpl.
146	962210015	Needle cage
147	939630370	Key
148	962900052	Radial ring
149	962900052	Radial ring
150	930916160	Spring ring
151	394245010	Stop ring, hardened
152	394182020	Guide disc
153	394111111	Crankcase, mag. side, grey
154	394111120	Crankc., clutch side, grey
155	965531110	Gasket
156	936430160	Spiral clamping pin (qty. 2)
157	908005305	M5x30 Screw (qty. 5)
158	960102159	Ball bearing (use glue)
159	960102159	Ball bearing (use glue)
160	394223022	Clutch drum assy.
161	965300470	V-belt
162	024182060	Guide disc
163	010180021	Clutch assy.
164	024184021	Spring (qty. 3)
165	394213010	Cover, grey
167	908605145	M5x14 Screw (qty. 3)
168	965402870	Rubber plate

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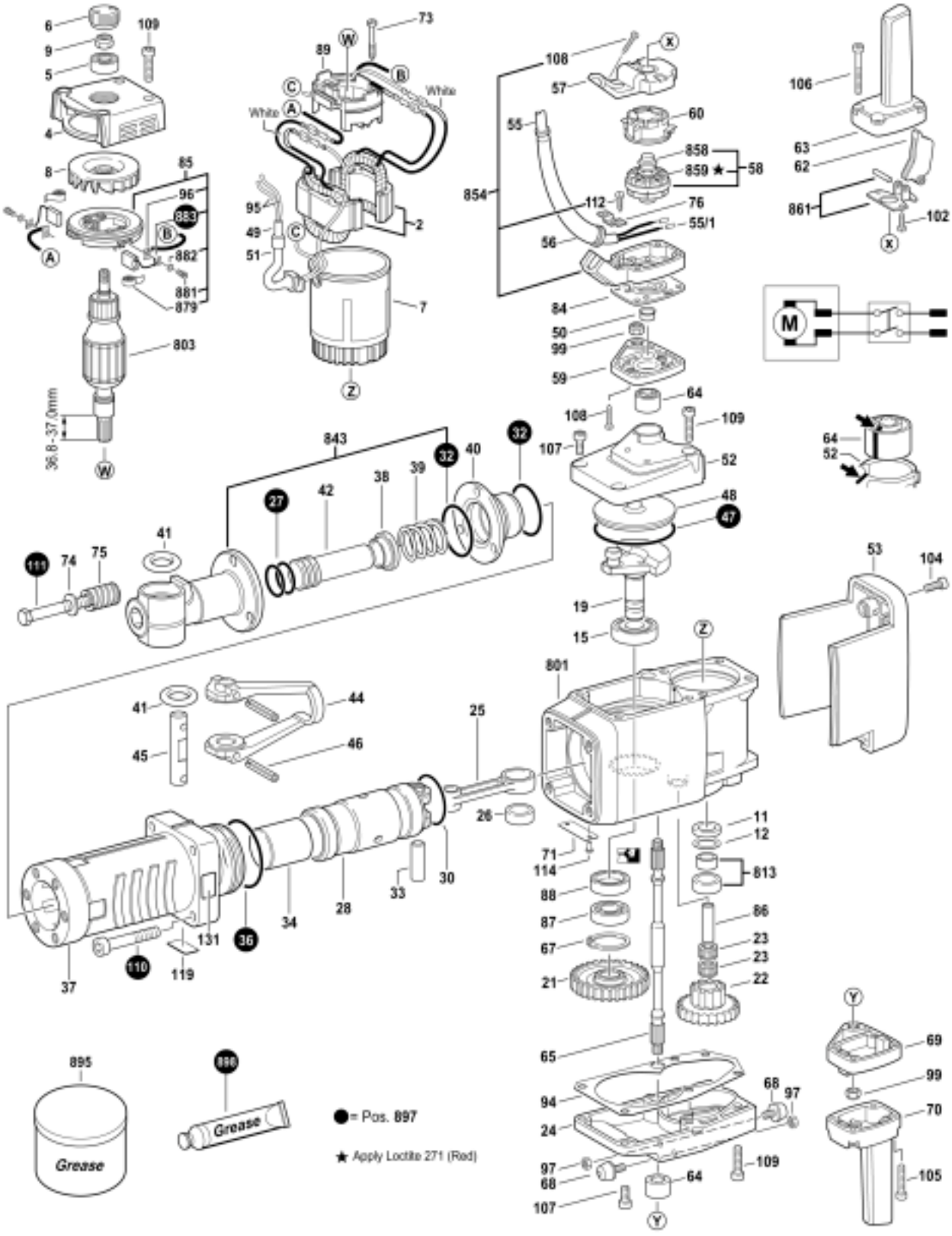
Bosch “Brute” Hammer

Model Numbers
11304



Bosch Breaker Hammer

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Bosch "Brute" Hammer

Model Numbers
11304

Key No.	Part No.	Description
2	1 614 220 157	Field 120V
4	1 615 805 068	Bearing Housing
5	1 610 900 015	Ball Bearing
6	1 615 500 214	Retaining Nut
7	1 615 108 104	Field Housing
8	1 616 610 091	Fan
9	1 613 313 000	Nut
11	1 610 108 013	Felt Seal
12	1 610 102 616	Washer
15	1 610 910 091	Needle Bearing
19	1 616 110 033	Eccentric Shaft
21	1 616 318 009	Eccentric Gear
22	1 616 328 036	Intertmediate Gear
23	1 610 913 005	Needle Bearing (qty. 2)
24	1 615 500 323	Gear Housing Cover
25	1 612 001 027	Connecting Rod
26	1 610 910 092	Needle Bearing
27	1 610 210 033	O-Ring (qty. 2)
28	1 618 700 043	Piston
30	1 614 601 039	Retainer
32	1 900 210 156	O-Ring (qty. 2)
33	3 613 101 500	Wrist Pin
34	1 618 710 039	Striker
36	1 900 210 166	O-Ring
37	1 615 806 029	Guide Tube
38	1 610 220 009	Ring
39	1 614 619 005	Spring
40	1 615 700 017	Flange
41	1 610 210 008	O-Ring (qty. 2)
42	1 613 123 003	Impact Bolt
44	1 618 045 018	Locking Lever
45	1 613 103 004	Locking Bolt
46	2 917 760 187	Roll Pin (qty. 2)
47	1 900 210 172	O-Ring
48	1 610 516 007	Eccentric Cover
49	1 610 707 000	Sleeve
50	3 600 421 500	Brass Bushing
51	1 610 703 019	Strain Relief
52	1 615 500 324	Slide Housing Cover
53	1 615 500 325	Top Housing Cover
55	3 604 460 507	Cord 115V
55/1	1 900 452 003	Terminal Sleeve (qty. 2)
56	1 610 703 011	Strain Relief
57	1 615 500 212	Switch Cover
58	1 617 200 015	Switch
59	1 615 700 041	Intermediate Plate
60	1 615 500 211	Switch Flange
62	1 612 026 011	Switch Lever
63	1 615 132 010	Switch Handle
64	1 616 334 000	Handle Buffer (qty. 2)
65	1 613 060 005	Shaft
67	2 916 660 023	Retaining Ring
68	1 613 465 001	Handle Bumper (qty. 2)
69	1 615 700 042	Intermediate Plate
70	1 615 132 011	Handle
71	1 611 11A 004	Name Plate
73	1 603 435 019	Screw (qty. 2)
74	2 916 160 009	Spring Washer (qty. 3)
75	3 614 640 501	Spring (qty. 3)
76	3 611 034 500	Cord Clamp
84	1 611 099 003	Mounting Plate
85	1 614 336 045	Brush Holder w/pos. 96, 879 - 883
86	1 610 300 033	Pin
87	1 610 900 027	Ball Bearing
88	1 610 283 016	Oil Seal
89	1 610 009 008	Insulating Plate
94	1 611 015 021	Gasket
95	1 614 431 030	Cable
96	1 614 448 037	Cable (qty. 2)
97	2 915 011 007	Nut (qty. 2)
99	3 613 313 500	Nut (qty. 2)
102	2 910 211 025	Screw (qty. 2)
104	2 910 141 201	Screw (qty. 4)
105	2 914 551 188	Screw (qty. 4)
106	2 914 551 189	Screw (qty. 4)
107	2 910 141 242	Screw (qty. 4)
108	2 914 201 707	Screw (qty. 4)
109	2 910 141 248	Screw (qty. 9)
110	2 910 141 356	Screw (qty. 4)
111	3 613 450 500	Hex Bolt (qty. 3)
112	2 910 211 236	Screw (qty. 2)
114	2 917 721 034	Pin (qty. 2)
119	1 601 110 058	Label
131	1 601 110 618	Label
801	1 617 000 851	Motor Housing Assembly w/pos. 11, 12, 15, 67, 71, 86, 87, 88, 114, 813
803	1 614 011 092	Armature 120V
813	1 610 910 035	Needle Bearing
843	1 617 000 428	Tool Holder Assembly w/pos.
854	3 607 000 509	Switch Housing Assembly w/pos. 108, 112
858	1 610 591 001	Switch Button
859	2 910 091 118	Switch Screw (qty. 6)
861	1 617 000 429	Mounting Plate Assembly
879	1 614 652 001	Brush Spring (qty. 2)
881	1 613 490 005	Screw (qty. 2)
882	2 916 699 130	Lock Washer (qty. 2)
883	1 617 000 425	Brush Set
895	1 615 430 016	Grease 1000ml
897	1 617 000 426	Service Pack
898	1 615 430 015	Grease 225ml

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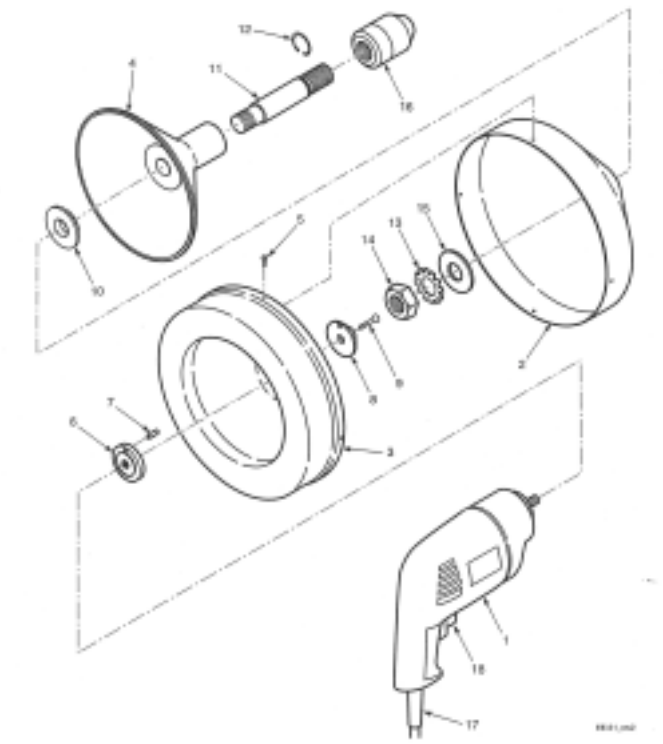
Electric Eel Drain Cleaner - Model S

Model Numbers
SKR3825

Key No.	Part No.	Description
1	S-DRL	Replacement Drill
2	S-1	Stainless Steel Drum
3	S-2	Drum Cover
4	S-4	Hand Guard
5	MS63238SS	Stainless Sheet Metal Screw
6	S-7*	Spacer
7	RP1812	Spiral Pin for S-7
8	S-8	Lock Collar
9	LHS103278	Left Hand Thread Screw
10	S-6	Collar
11	S-5***	Spindle
12	RR87	Retaining Ring
13	LW34E	External Lockwasher
14	NU3416J	Hex Jam Nut
15	S-9	Washer
16	S-JC	Jacobs Chuck
17	S-PC	Plug In Cord
18	S-TRSW**	Trigger Switch

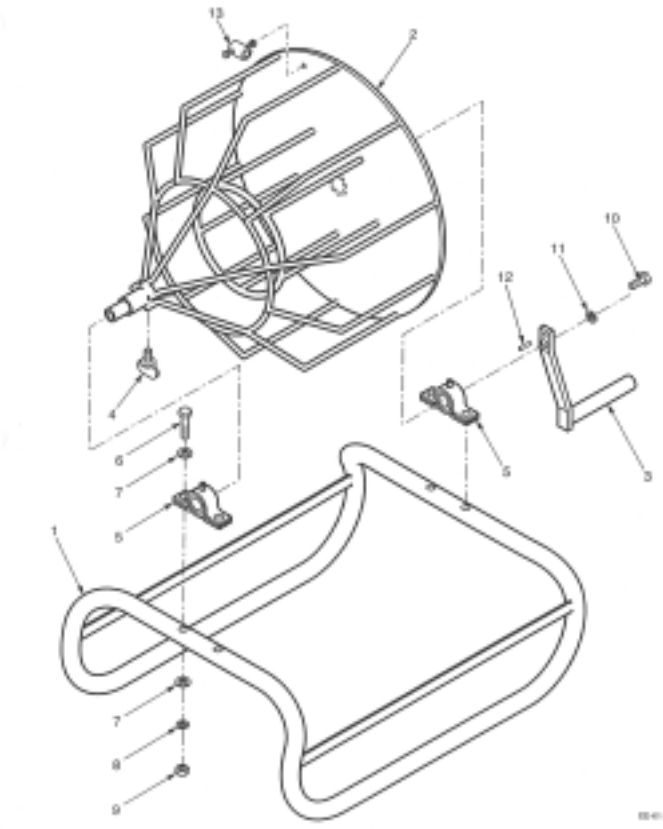
* Includes Item 7
** Prior to Serial No. 13871 use Part Number S-TRSWO - April 1999
*** S-5A Includes Items 10 through 15



Electric Eel Drain Cleaner - Model K

Model Numbers
KK1250

Key No.	Part No.	Description
1	K-1A	Frame Assembly
2	K-2A	Cage Assembly
3	K-6A	Crank Handle Assembly
4	TS38	3/8” Thumb Screw
5	K-PB	Pillow Block Assembly qty. 2
6	CSHH51618134	Pillow Block Capscrews qty. 4
7	WA516S	Pillow Block Washers qty. 8
8	LW516	Pillow Block Lockwashers qty. 4
9	NU51618FHP	Pillow Block Nuts qty. 4
10	CSHH381658	Handle Capscrew
11	LW38	Handle Lockwasher
12	RP1478	Handle Drive Pin
13	DN-6	Cable Anchor



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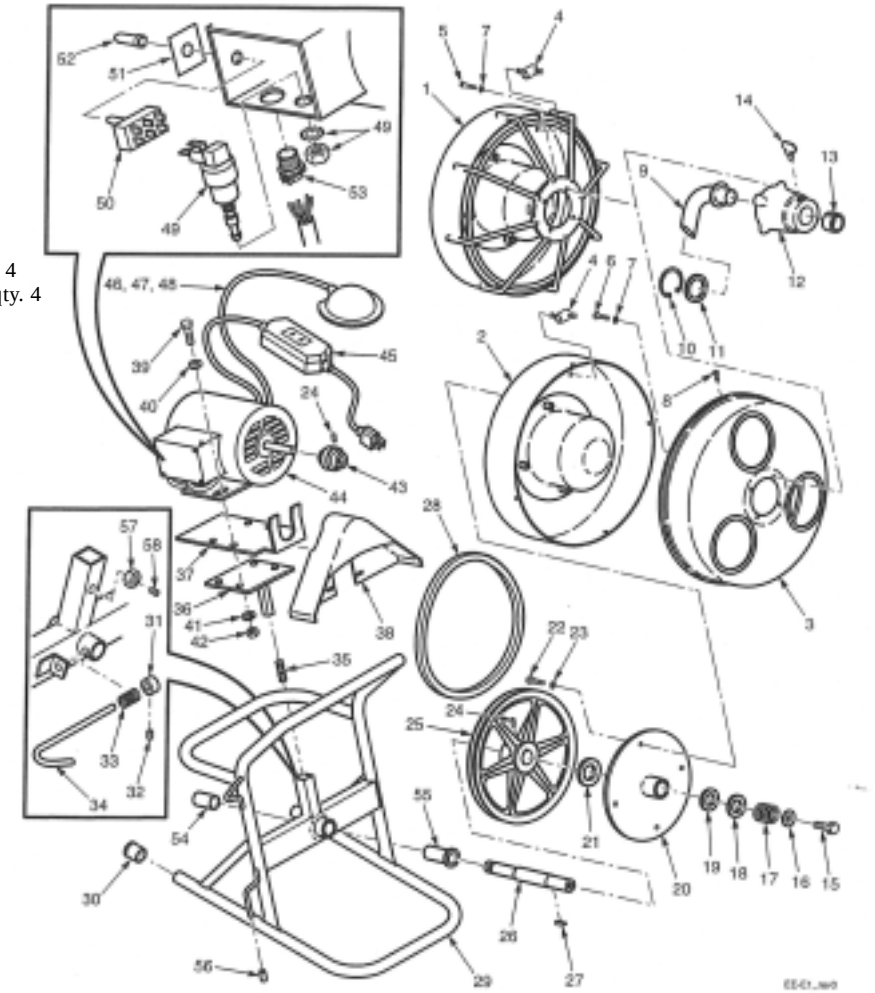
Electric Eel Drain Cleaner - Model E

Model Numbers
EKR1250



Key No.	Part No.	Description
1	ED-3*	Welded Drum/Cage Assembly
2	ED-1*	Rear Cable Drum w/Inner Drum
3	ED-2	Front Cable Drum
4	DN-6	Cable Anchor (used with ED-1 only)
5	MS102412HH	10-24 x 1/2 Hex Head Machine Screw qty. 4
6	MS102438RH	10-24 x 3/8 Round Head Machine Screw qty. 4
7	LW10	Lockwasher qty. 4
8	MS83214SS	Stainless Steel Metal Screw qty. 4
	ED-4A**	Guide Tube and Bracket Assembly
9	ED-4	Guide Tube
10	RR175	Retaining Ring
11	N-5-4	Retaining Washer
12	ED-5	Bracket
13	ED-6	Collar
14	WS516	5/16-18 Wing Screw
	EE-1A***	Drive Assembly w/Clutch
15	CSHH12201	1/2-20 x 1 Hex Head Capscrew
16	WA716P	Flatwasher
17	N-14	Spring
18	EE-3	Drive Disc
19	EE-4	Front Friction Disc
20	EE-2	Drum Mounting Plate
21	EE-5	Rear Friction Disc
22	CSHH142034	1/4-20 x 3/4 Hex Head Capscrew qty. 4
23	LW14	Lockwasher qty. 4
24	SS51618516	5/16-18 x 5/16 Set Screw qty. 2
25	EE-6	10” Pulley
26	EE-1	Drive Shaft
27	N-15	Clutch Key
28	4L390	V-Belt
	EF-1A****	Frame Assembly
29	EF-1	Welded Frame
30	EE-14	Rubber Tips qty. 2
31	EE-8	Retainer Pin Collar
32	SS103218	10-32 x 1/8 Set Screw
33	EE-15	Retainer Pin Spring
34	EE-7	Retainer Pin
35	EE-9	Motor Tension Spring
36	R23******	Motor Mount
37	R22******	Adapter Plate
38	EE-12	Belt Guard
39	CSHH516181	Motor Mount Capscrews qty. 4
40	WA516S	Motor Mount Flatwashers qty. 4
41	LW516	Motor Mount Lockwashers qty. 4
42	NU51618FHP	Motor Mount Nutsqty. 4
43	N-8	Motor Pulley
44	EM-1/3	1/3 H.P. Motor w/Fwd-Rev Switch
45	GFCI	Ground Fault Circuit Interrupter w/Cord
46	FP-1A*****	Air Foot Pedal Transmitter w/Air Hose
47	FP-1	Foot Pedal Only
48	FP-2	Air Hose Only
49	TBS3218	Air Activated On/Off Switch.
50	SW-FR	Forward/Reverse Switch
51	SW-FRP	Forward/Reverse Switch Plate
52	SW-BOOT	Toggle Switch Boot
53	TSC12	Two-Screw Connector
54	0BSS243220	Rear Bronze Bushing
55	0BSF243216	Front Bronze Bushing
56	DL6CAP	Cord Hook Cap qty. 2
57	SS5162458DP*******	5/16-24 Set Screw Dog Point
58	NU51624FHP*******	5/16-24 Hex Nut

* Includes Item 4
** Includes Items 9-14
*** Includes Items 15-27
**** Includes Items 29-37 and 54-58
***** Includes Items 47 and 48
****** Prior to Serial No. 6629, Item 36 part no. is EE-10 and Item 37 part no. is EE-11.
*******Added to assembly, beginning with Serial No. 8141.

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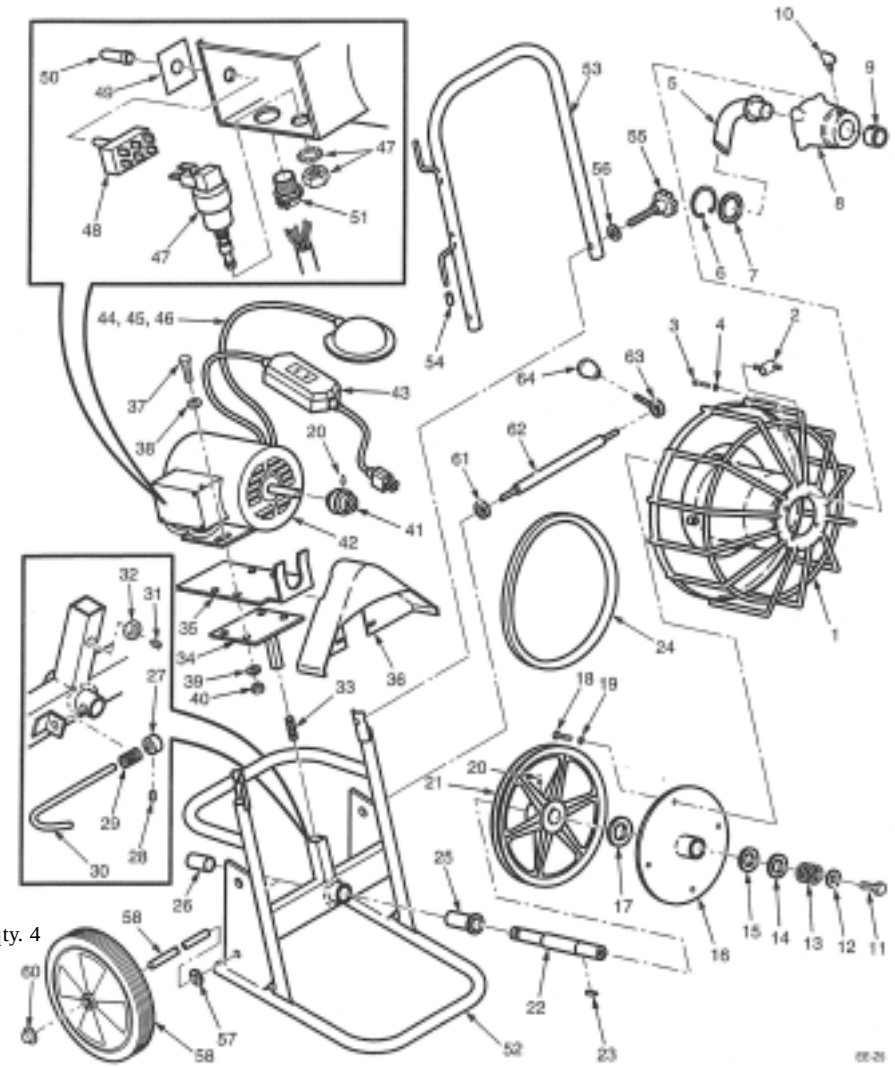
Electric Eel Drain Cleaner - Model Z5

Model Numbers
Z5K1275



Key No.	Part No.	Description
1	Z-6*	Welded Drum/Cage Assembly
2	DN-6	Cable Anchor
3	MS102412HH	10-24 x 1/2 Hex Head Machine Screw qty. 4
4	LW10	Lockwasher qty. 4
	ED-4A**	Guide Tube and Bracket Assembly
5	ED-4	Guide Tube
6	RR175	Retaining Ring
7	N-5-4	Retaining Washer
8	ED-5	Bracket
9	ED-6	Collar
10	WS516	5/16-18 Wing Screw
	EE-1A***	Drive Assembly w/Clutch
11	CSHH12201	1 1/2-20 x 1 Hex Head Capscrew
12	WA716P	Flatwasher
13	N-14	Spring
14	EE-3	Drive Disc
15	EE-4	Front Friction Disc
16	EE-2	Drum Mounting Plate
17	EE-5	Rear Friction Disc
18	CSHH142034	1/4-20 x 3/4 Hex Head Capscrew qty. 4
19	LW14	Lockwasher qty. 4
20	SS51618516	5/16-18 x 5/16 Set Screw qty. 2
21	EE-6	10" Pulley
22	EE-1	Drive Shaft
23	N-15	Clutch Key
24	4L390	V-Belt
25	0BSF243216	Front Bronze Bushing
26	0BSS243220	Rear Bronze Bushing
27	EE-8	Retainer Pin Collar
28	SS103218	10-32 x 1/8 Set Screw
29	EE-15	Retainer Pin Spring
30	EE-7	Retainer Pin
31	SS5162458DP	5/16-24 Set Screw Dog Point
32	NU51624FHP	5/16-24 Hex Nut
33	EE-9	Motor Tension Spring
34	R-23	Motor Mount
35	R-22	Adapter Plate
36	EE-12	Belt Guard
37	CSHH516181	Motor Mount Capscrews qty. 4
38	WA516S	Motor Mount Flatwashers qty. 4
39	LW516	Motor Mount Lockwasher qty. 4
40	NU51618FHP	Motor Mount Nuts qty. 4
41	N-8	Motor Pulley
	42 EM-1/3	1/3 H.P. Motor w/Fwd-Rev Switch
43	GFCI	Ground Fault Circuit Interrupter w/Cord
44	FP-1A	**** Air Foot Pedal Transmitter w/Air Hose
45	FP-1	Foot Pedal Only
46	FP-2	Air Hose Only
47	TBS3218	Air Activated On/Off Switch
48	SW-FR	Forward/Reverse Switch
49	SW-FRP	Forward/Reverse Switch Plate

Key No.	Part No.	Description
51	TSC12	Two-Screw Connector
	Z-1A*****	Frame Assembly
52	Z-1	Frame Base
53	Z-2A	Frame Handle
54	DL6CAP	Cord Hook Cap qty. 2
55	DE-7	Tension Handle qty. 2
56	WA38S	Flatwasher qty. 2
57	WA12S	Flatwasher qty. 8
58	Z-5	Axle
59	C-W10	10" Diameter x 5/8 Wheel qty. 2
60	PN12	Pushnuts qty. 2
61	DF-8	Brake Rod Collar
62	Z-4	Brake Rod
63	Z-3	Brake Lever
64	DE-14	Brake Lever Knob

* Includes Item 2
** Includes Items 5-10
*** Includes Items 11-23
**** Includes Items 45 and 46
***** Includes Items 25-32 and 52-59

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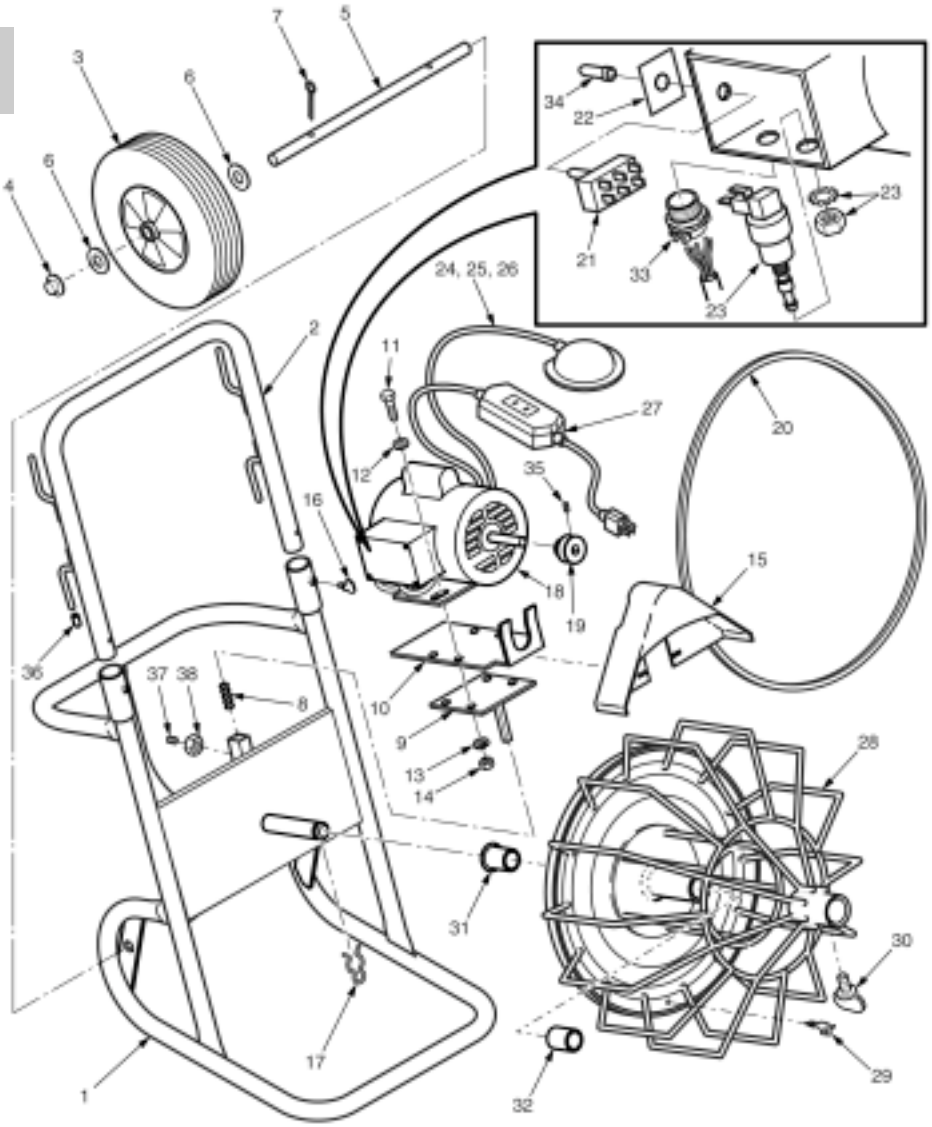
Electric Eel Drain Cleaner - Model R

Model Numbers
RK58



Key No.	Part No.	Description
1	R-10*****	Frame
2	R-12******	Handle
3*	R-W10	10” Diameter x 5/8 Wheels qty. 2
4	PN58	Push Nut qty. 2
5	R-3	Axle
6	WA58P	Washers qty. 4
7	CP532114	Cotter Pin qty. 2
8	R-11	Motor Tension Spring
9	R-23****	Motor Mount Assembly
10	R-22****	Adapter Plate Assembly
11	CSHH516181	Motor Mount Capscrews qty. 4
12	WA516S	Motor Mount Washers qty. 4
13	LW516	Motot Mount Lockwashers qty. 4
14	NU51618FHP	Motor Mount Nuts qty. 4
15	R-18	Belt Guard
16	DL-4	Thumb Screw qty. 2
17	R-HPC	Hairpin Clip
18	RM-1/3	Motor - 1/3 HP, 115 Volt, 60 cycles
19	N-8	Motor Pulley
20	A48	V-belt
21	SW-FR	Forward/Reverse Switch
22	SW-FRP	Forward/Reverse Switch Plate

Key No.	Part No.	Description
23	TBS3218	Air Activated On/Off Switch
24	FP-1A**	Air Bulb Foot Pedal with Hose
25	FP-1	Foot Pedal
26	FP-2	Air Hose
27	GFC1	Ground Fault Circuit Interrupter 20’ Cord
28	R-20***	Cable Cage with Anchor
29	R-14	Cable Anchor
30	WS 12	Wing Screw
31	0BSF324016	Rear Bronze Bushing
32	0BSS324216	Front Bronze Bushing
33	TSC 12	Two Screw Connector
34	SW-Boot	Forward/Reverse Switch Boot
35	SS51618516	Set Screw
36	DL6CAP	Cord Hook Cap qty. 4
37	SS5162458DP	5/16 - 24 x 5/8 Set Screw Dog Point
38	NU51624FHP	5/16 - 24 Hex Nut

* Includes Item 4
** Includes Items 25, 26
*** Includes Items 17, 29, 30, 31, 32
**** Prior to Serial No. 5047, Item #9 part no. is R-16 and Item #10 part no. is R-17
***** Includes Items 8, 9, 10, 37, 38
****** Includes Item 36

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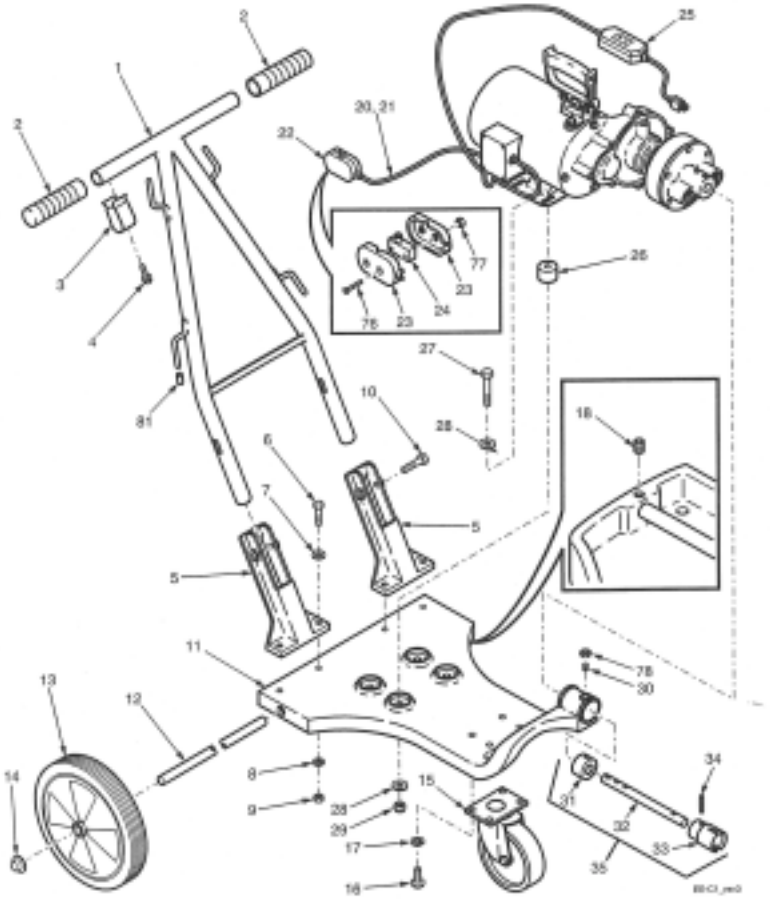
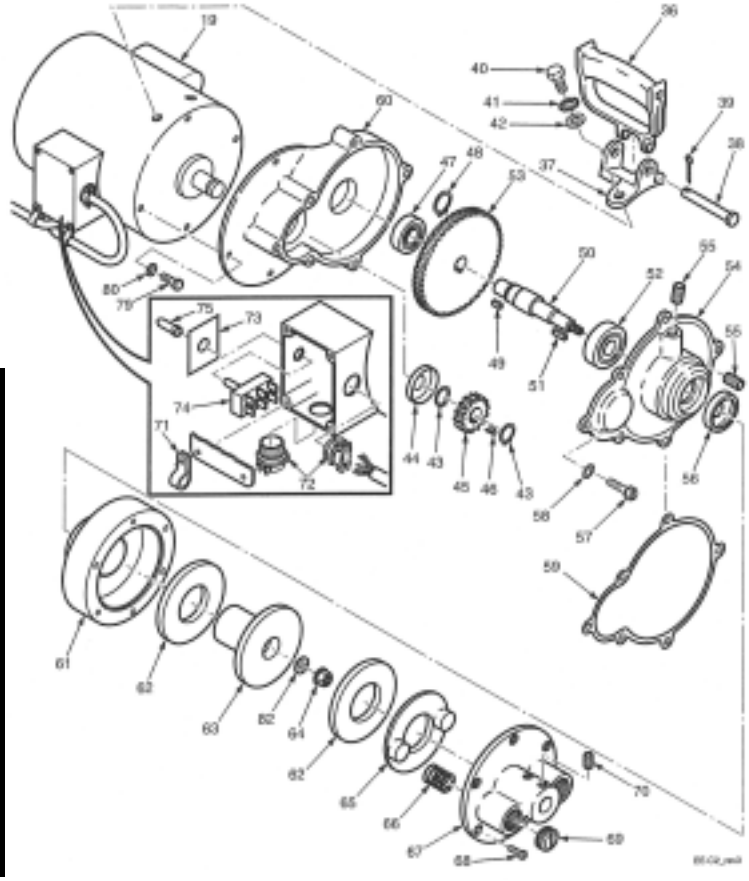
Electric Eel Drain Cleaner - Model C

Model Numbers
CK128





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Electric Eel Drain Cleaner - Model C

Model Numbers
CK128

Key No.	Part No.	Description
1	DL-9*	Folding Handle
2	HG	Handle Grips qty. 2
3	DL-7	Switch Clip
4	SM121H	Switch Clip Screw
5	DL-10	Bracket (Base of Folding Handle) qty. 2
6	CSHH51618112	Bracket Capscrews qty. 4
7	WA516S	Bracket Washers qty. 4
8	LW516	Bracket Lockwashers qty.4
9	NU51618FHP	Bracket Nuts qty.4
10	CSHH3816214	Folding Handle Capscrews qty. 2
11	M-12	Drive Unit Base
12	M-13	Axle
13	C-W10	10” Diameter x 5/8 Wheels qty. 2
14	PN12	Pushnuts qty. 2
15	C-SWC	Swivel Caster
16	MS142058RH	Caster Screw qty. 4
17	LW 14	Caster Lockwasher qty. 4
18	SS5161812	Axle Setscrew
19	CM-1/2**	1/2 H.P. Replacement Motor
	CM-3/4	3/4 H.P. Replacement Motor
	CM-1 1	H.P. Replacement Motor
20	C-HSCD-A	15 Ft. 14/2 W/M-10AY Hand Switch
21	C-HSCD	15 Ft. 14/2 Cord Only (Less Hand Switch)
22	M-10AY*****	Hand Switch with Case Assy
23	M-10	Switch Case Only
24	YA-2	Momentary Contact Switch (Less Case)
25	GFCI	Ground Fault Circuit Interrupter 20’ Cord
26	M-7	Rubber Mounts qty. 4
27	CSHH516182	Rubber Mount Capscrews qty. 4
28	WA516P	Rubber Mount Flatwashers qty. 8
29	NU51618NY	Rubber Mount Nuts. qty. 4
30	SS381634DP	3/8-16 x 3/4 Set Screw Dog Point
31	SC-11	Guide Ball
32	SC-12	Shaft
33	SC-10	Front Coupling
34	RP316118	Spiral Pin
35	SC-10A***	Fitting
	M-4A******	Handle Assembly
36	M-4	Carry Handle
37	M-5	Bracket
38	M-3****	Handle Pin
39	CP33234	Cotter Pin
40	CSHH5161858	Handle Capscrew qty. 2
41	LW516E	Handle Lockwasher qty. 2
42	WA516S	Handle Flat Washer qty. 2
43	RR66	Retaining Ring qty. 2
44	471553	Rear Oil Seal for Motor Shaft
45	KC-4	Small Gear w/Key
46	WK3	Woodruff Key
47	6203ZZ	Rear Ball Bearing
48	RR75	Retaining Ring
49	K31612	Key
50	KC-8	Back Gear Shaft
51	K31634	Key
52	6304ZZ	Front Ball Bearing
53	KC-7	Large Gear w/Key
54	KC-3	Gear Case Cover
55	PP18	Pipe Plug qty. 2
56	7829CR	Front Oil Seal for Back Gear Shaft
57	MS102434HHWS	Gear Case Cover Screws qty. 6
58	LW10E	Gear Case Cover Lockwashers qty. 6
59	KC-5	Gear Case Gasket
60	KC-2	Gear Case
61	GE-30	Clutch Body
62	E-2	Clutch Friction Disc qty.2
63	E-3	Clutch Drive Member
64	NU3824NY	Back Gear Shaft Nut
65	GE-33	Clutch Pressure Plate
66	E-4	Clutch Spring qty. 2
67	GE-31	Clutch Cover Plate.
68	MS142058FLH	Screw qty. 6
69	E-7	Clutch Adjusting Screw qty. 2
70	SS5161834	Socket Head Setscrew Anchors Item 35 qty. 2
71	CH31S10	Wire Clamp qty. 2
72	C-TSC12	Screw Connector qty. 2
73	SW-FRP	Forward/Reverse Switch Plate
74	SW-FR	Reversing Switch
75	SW-BOOT	Toggle Switch Boot
76	MS8321FH	Switch Case Screws qty. 2
77	NU832FHP	Switch Case Nuts qty. 2
78	NU3816J	3/8-16 Jam Nut
79	CSHH38161	3/8-16 x 1 Hex Head Capscrew qty. 3
80	LW38I	3/8 Lockwasher - Internal qty. 3
81	DL6CAP	Cord Hook Cap qty. 4
82	WA38S	3/8 Flatwasher

* DL-9A - Folding Handle Complete with Hardware. Includes items 1-10 and 81.
** Includes Items 71-75
*** Includes Items 31 - 34
**** Includes Item 39
***** Includes Items 23, 24, 76, 77
****** Includes Items 36,37, 38

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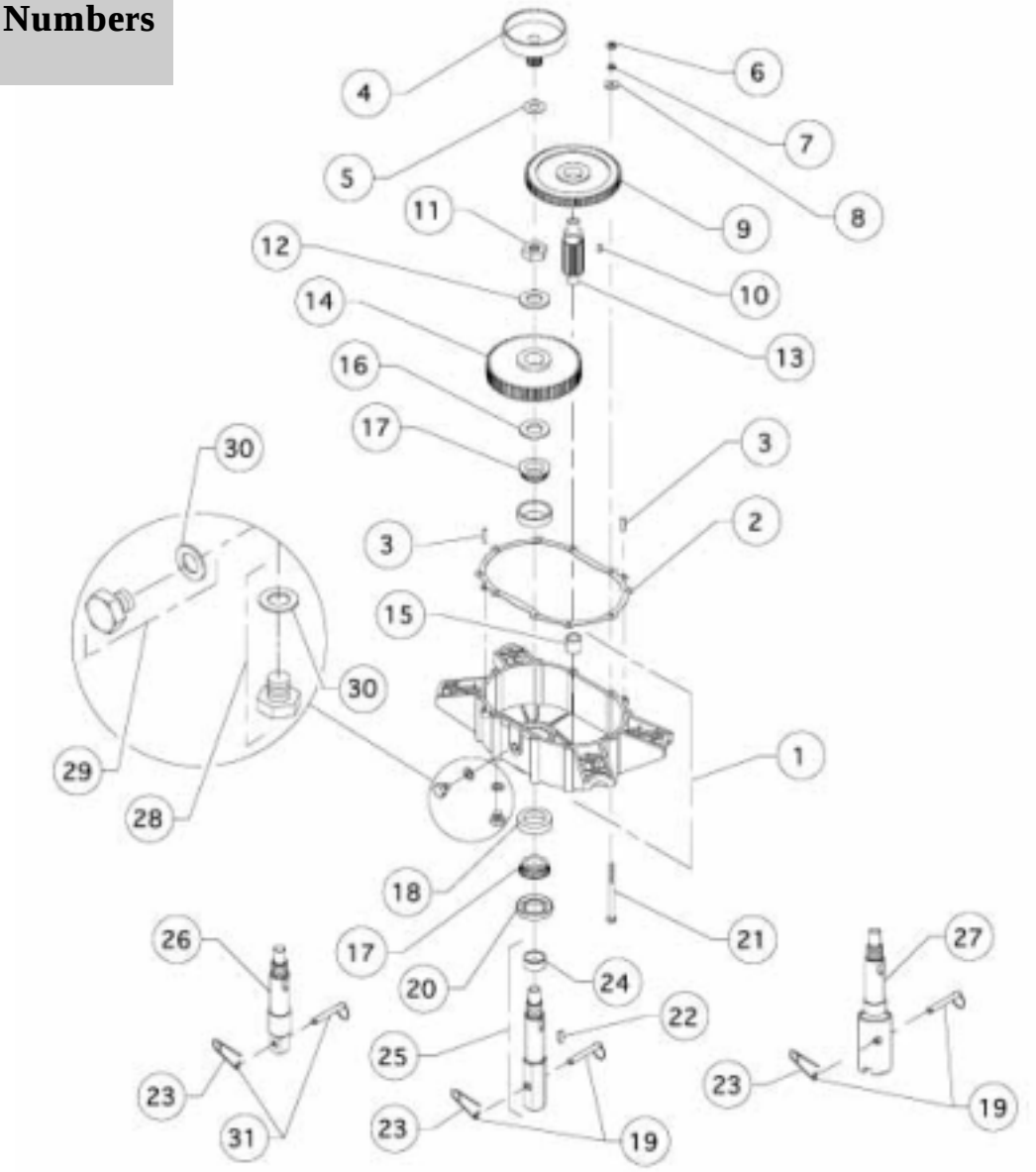
Two Man Hole Digger-General Equipment Company

Model Numbers
M330H



Key No.	Part No.	Description
1	310-0121-A	Case, Transmission (Includes P/N A-1007-8 and 08231)
2	310-0101	Gasket, Transmission
3	51040800	Pin, Dowel, 1/4" x 1 qty. 2
4	3516	Drum And Pinion Assembly, Clutch
5	200682	Washer, Fiber
6	18050000	Nut, Hex, 5/16" UNC, Plated qty. 10
7	16050000	Washer, Lock, 5/16", Plated qty. 10
8	AN-960-516L	Washer, AN Type, 5/16", Plated qty. 10
9	7034	Gear, Primary
10	6	Key, Woodruff, 5/32" x 5/8", Alloy
11	19160001	Nut, Hex, 1"-14 UNF, Self-Locking
12	17160000	Washer, Flat, 1", Plain Finsh
13	345-0310	Pinion
14	345-0350	Gear, Secondary
15	FES2250-7	Bushing, Oilite®
16	08125/08231B-AV	Ring, Nilos®
17	08125	Cone, Bearing qty. 2
18	08231	Cup, Bearing qty. 2

Key No.	Part No.	Description
19	2121	Pin, Auger, General and Stihl (Includes P/N AP-21-S)
20	471820	Seal, Oil
21	15053600	Screw, Cap, 5/16" x 4 1/2" UNC, Grade 5, Plated qty. 10
22	15	Key, Woodruff, 1/4" x 1", Alloy
23	AP-21-S	Pin, Safety
24	345-0332-020	Bushing
25	330H-0330-A	Shaft, Drive, 1 3/8" Hexagon, 6 Side (Includes P/N 345-0332-020)
26	343H-0330	Shaft, Drive, 7/8" Square, Ground Hog Type Drive (P/N 345-0332-020 Not Required)
27	357H-0330	Shaft, Drive, Stihl Type Drive (P/N 345-0332-020 Not Required)
28	50100800	Plug, Oil Drain (Includes P/N 66044)
29	50100801	Plug, Oil Level (Includes P/N 66044)
30	66044	Gasket, Oil Plug qty. 2
31	2021	Pin, Auger, Gound Hog (Includes P/N AP-21-S)

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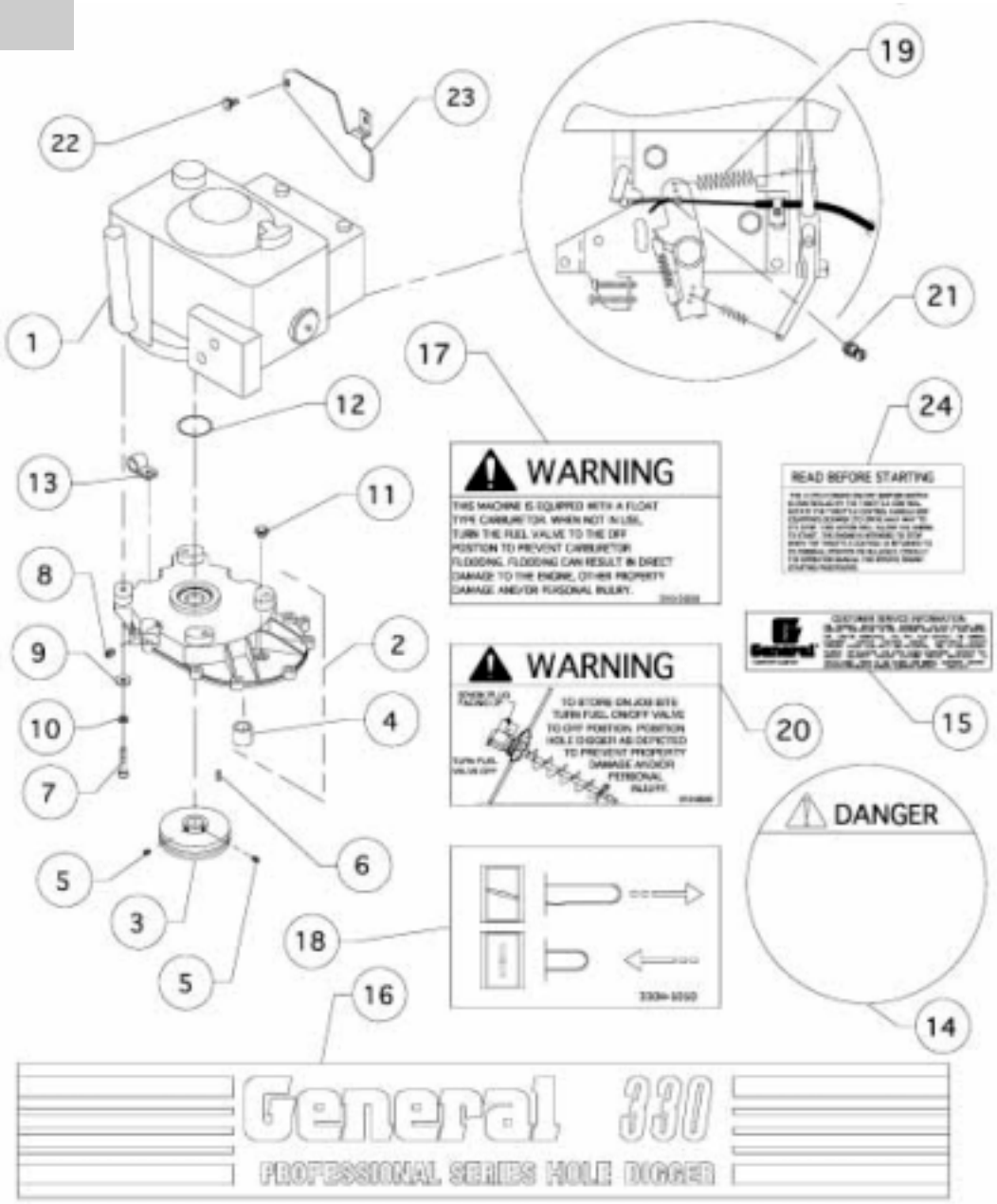
Two Man Hole Digger-General Equipment Company

Model Numbers
M330H



Key No.	Part No.	Description
1	GXV140N1GE	Engine, Honda (5 HP)
2	330-0134-A	Cover, Transmission (Includes P/N FES 2250-7)
3	330H-0170	Rotor And Shoe Assembly, Clutch
4	FES 2250-7	Bushing, Oilite®
5	31040201	Screw, Set, Cup, 1/4-28 x 1/4" qty. 2
6	6	Key, Woodruff, 5/32" x 5/8", Alloy qty. 2
7	60051401	Screw, Scoket, 5/16" x 1 3/4" UNF, Plateed qty. 4
8	74020201	Plug, Pipe, 1/8-27 PTF
9	AN-960-516L	Washer, AN Type, 5/16", Plated qty. 4
10	16050000	Washer, Lock, 5/16", Plated qty. 4
11	5677	Valve, Pressure Release
12	330H-0050	"O" Ring
13	COV-0411	Clamp, Plated

Key No.	Part No.	Description
14	210-5020	Decal, Danger
15	SG24-5071	Decal,Assistance
16	330-5011	Decal, (Model 330 Only)
	343-5010	Decal, (Model 343 Only)
	357-5010	Decal, (Model 357 Only)
17	310-5030	Decal, warning
18	330H-5050	Decal, Choke
19	330H-0400	Spring, Governor
20	310-5040	Decal, Warning
21	WS-277	Assembly, Swivel
22	88061010	Screw, Cap, Flange, M6 x 10mm qty. 2
23	330H-0190	Guard, Governor Spring
24	330H-5040	Decal, Ignition

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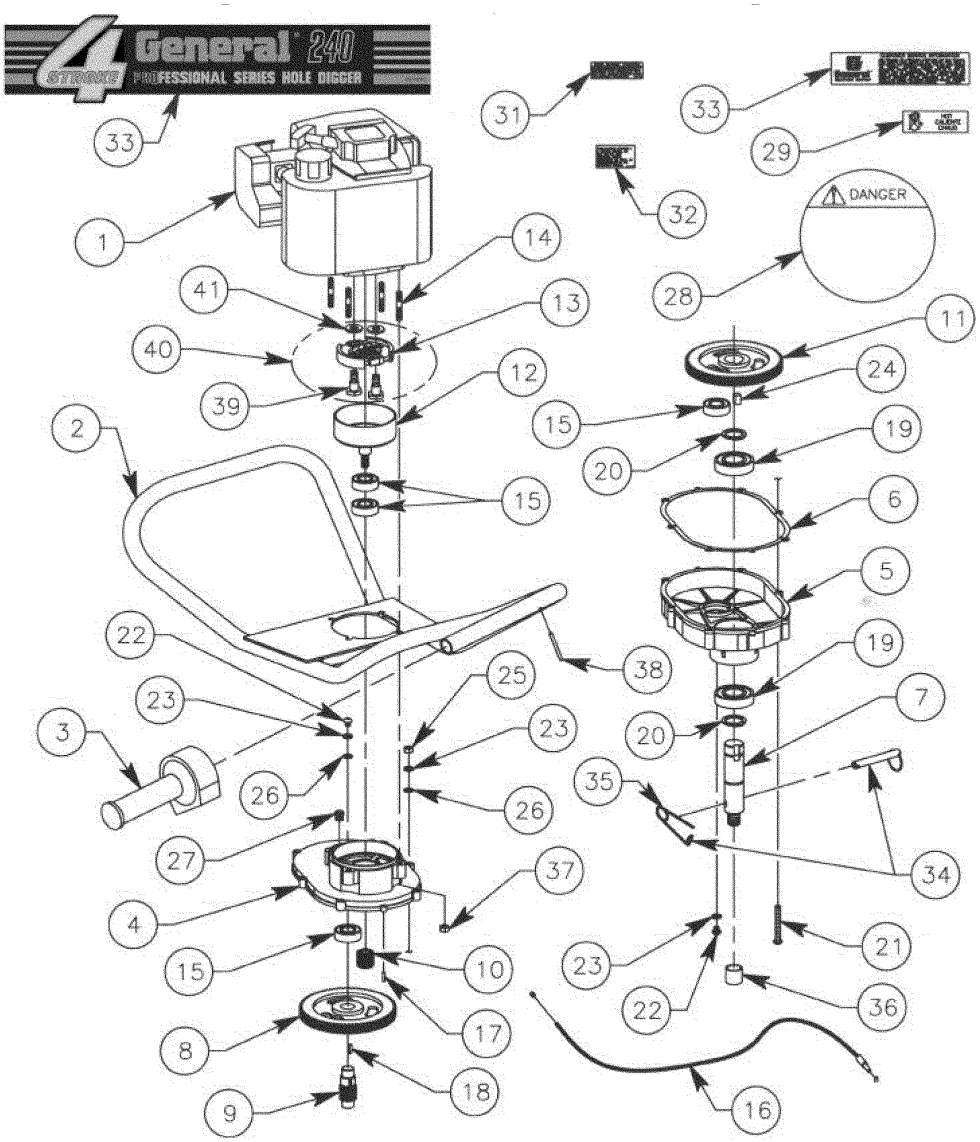
One Man Hole Digger-General Equipment Company

Model Numbers
M240



Key No.	Part No.	Description
1	EH035V	Engine, Robin Subaru, 1.6 HP
2	240-0090	Handle, Operator, Complete
3	310-0030	Throttle, Twist Control, Plastic, Complete
4	240-0130	Cover, Transmission
5	240-0120	Case, Transmission
6	240-0100	Gasket, Transmission
7	210-0330	Shaft, Drive, 1" Round
8	240-0350	Gear, Secondary, 78 Tooth
9	210-0310	Gear, Pinion, Secondary
10	210-0320	Gear, Pinion, Primary
11	240-0340	Gear, Primary, 78 Tooth
12	240-0160	Drum, Clutch
13	240-0170	Rotor And Shoe Assembly, Clutch
14	240-0200	Stud, M6 x 1/4-28 UNF, Plated qty. 4
15	99502H	Bearing, Sealed
16	240-0080	Cable, Throttle
17	51020400	Pin, Dowel, 1/8" x 1/2" qty. 2
18	3	Key, Woodruff, 1/8" x 1/2", Alloy
19	99R16	Bearing, Sealed qty. 2
20	5160-98	Ring, Snap qty. 2
21	34041600	Screw, Machine, Round Head, Phillips, qty. 6
22	37040200	Screw, Panhead, 1/4-20 UNC x 5/16", qty. 2
23	16040000	Washer, Lock, 1/4" Plated qty. 8
24	63050400	Key, Square, 5/16" x 1/2", Alloy
25	18040000	Nut, Hex, 1/4-20 UNC, Plated qty. 6
26	AN-960-416L	Washer, AN Type, 1/4", Plated qty. 8
27	5677	Valve, Pressure Release
28	210-5020	Decal, Danger
29	210-5040	Decal, Hot
30	SG24-5072	Decal, Assistance
31	240-5020	Decal, Starting
32	240-5030	Decal, 4 Stroke
33	240-5010	Decal, (Model 240)
34	2121	Pin, Auger, (Includes P/N AP-21-S)
35	AP-21-S	Pin, Safety
36	210-0010	Cap, Protective, Driveshaft
37	12040001	Nut, Hex. 1/4-28 UNF, Washer, Plated qty. 4
38	20020900	Pin, Roll, 1/8" x 1-1/8"
39	240-0180	Bolt, Clutch Pivot qty. 2
40	240-0170 KIT	Clutch Kit (Includes (1) P.N 240-0170, (2) P/N 240-0180, and (2) P/N 350-0190)
41	240-0190	Washer, Clutch qty. 2

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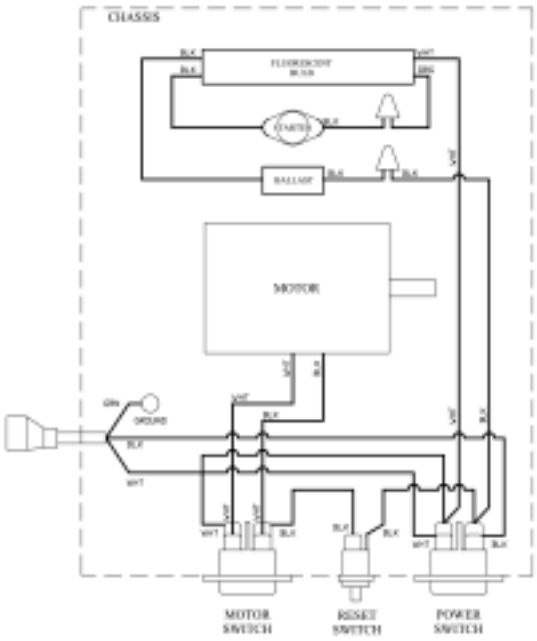
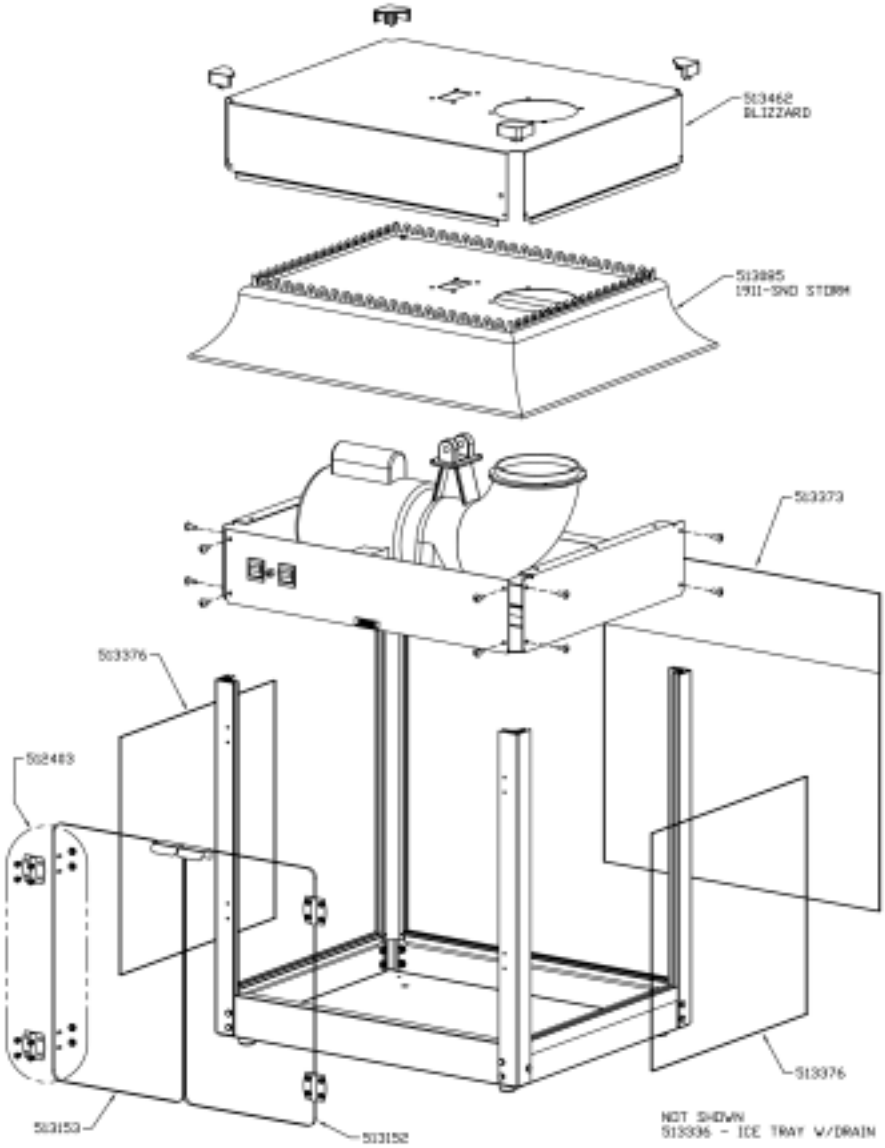
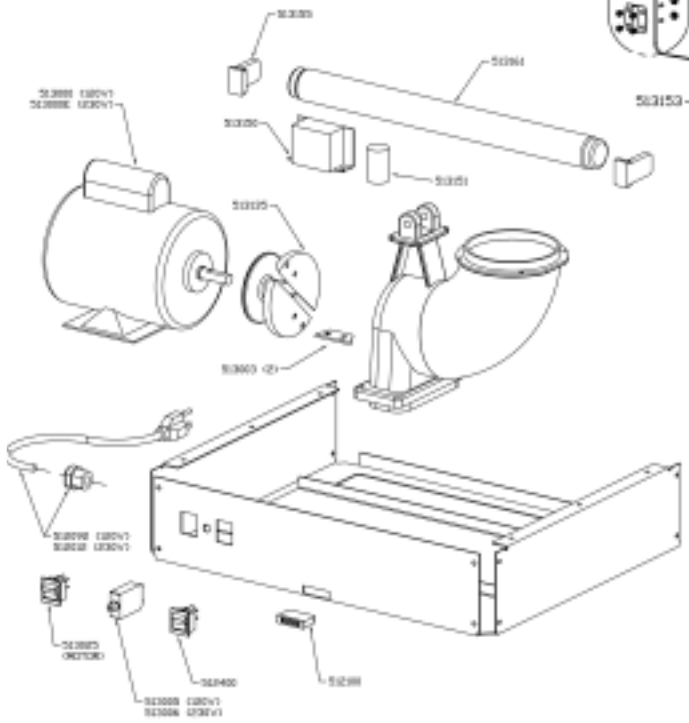
Sno-Cone Machine - Paragon “Sno-Storm”

Model Number
6133110







Sno Cone Machine

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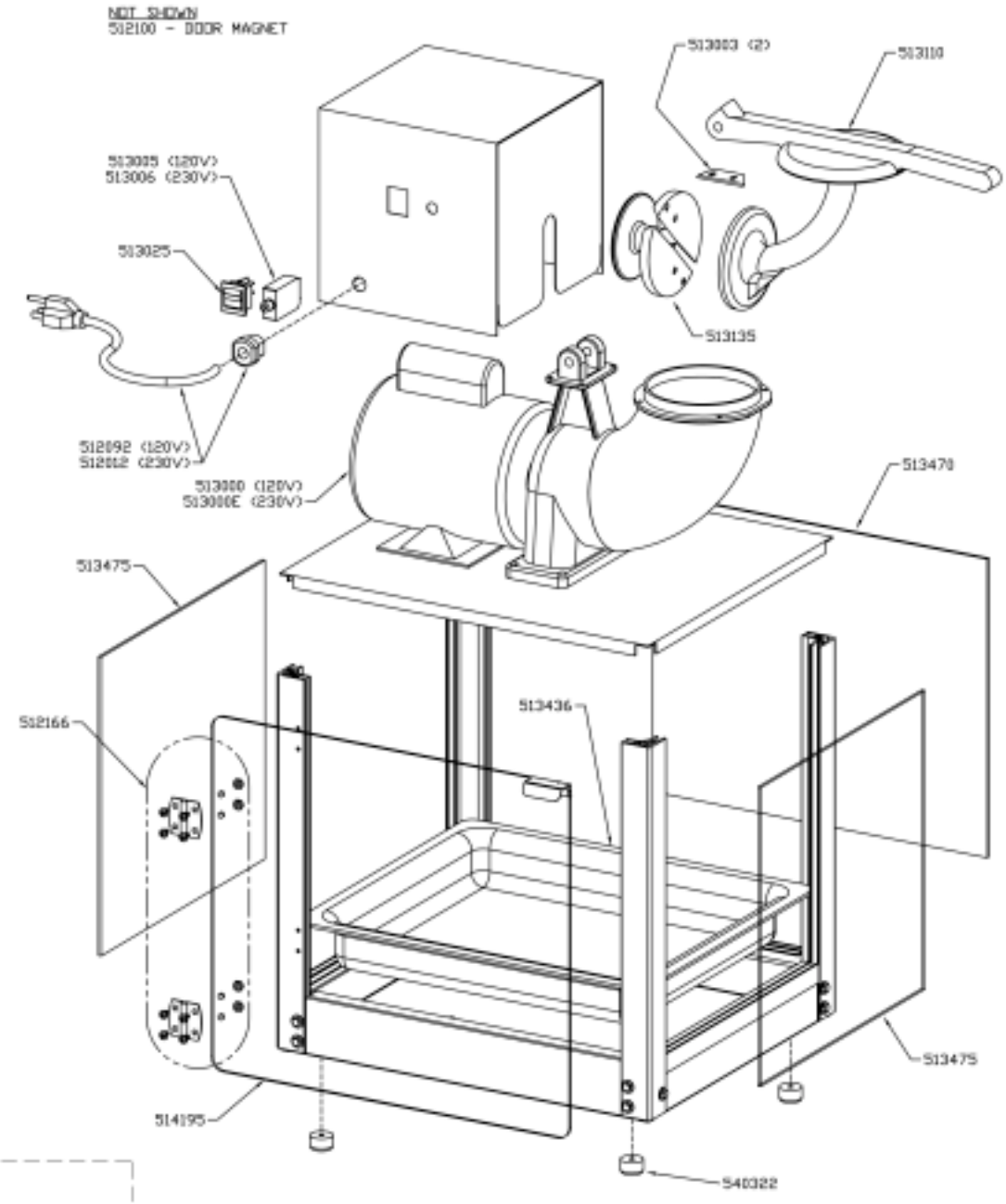
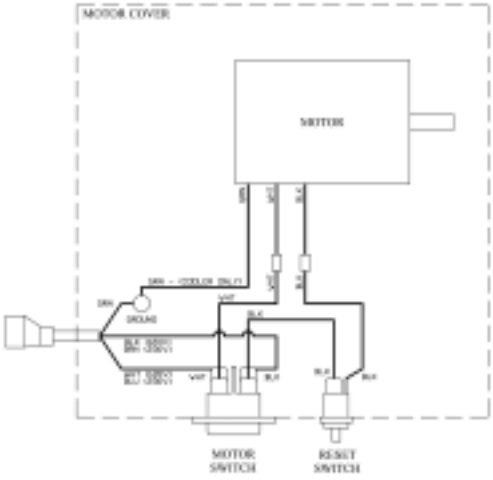
Sno-Cone Machine - Paragon “Arctic Blast”

Model Number
6133310





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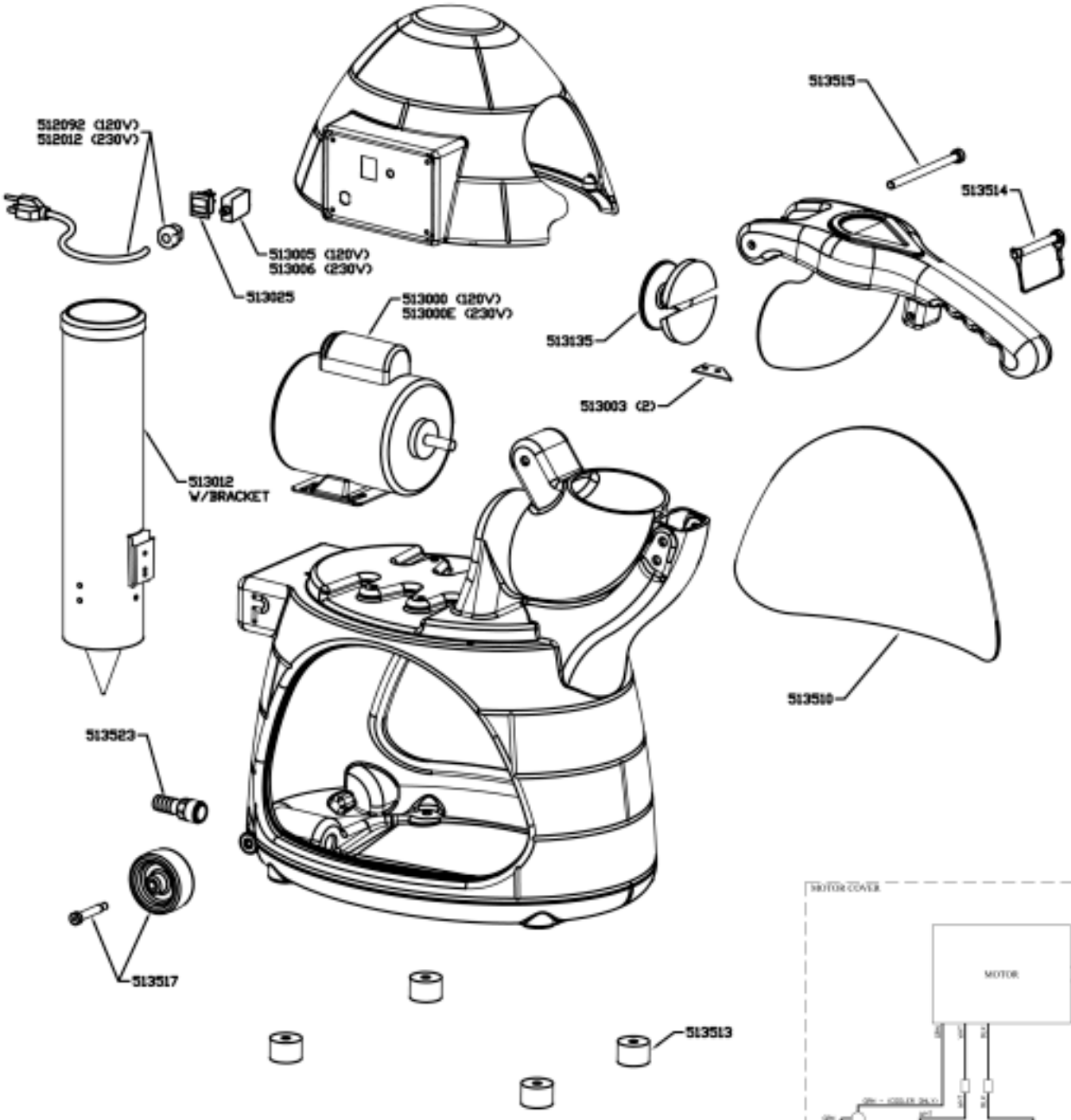
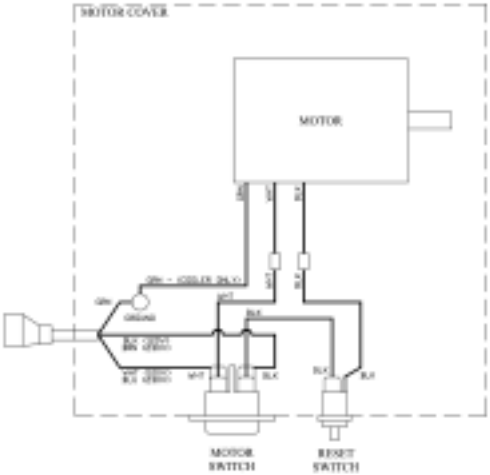
Sno-Cone Machine - Paragon “Cooler”

Model Number
6133410





Sno Cone Machine

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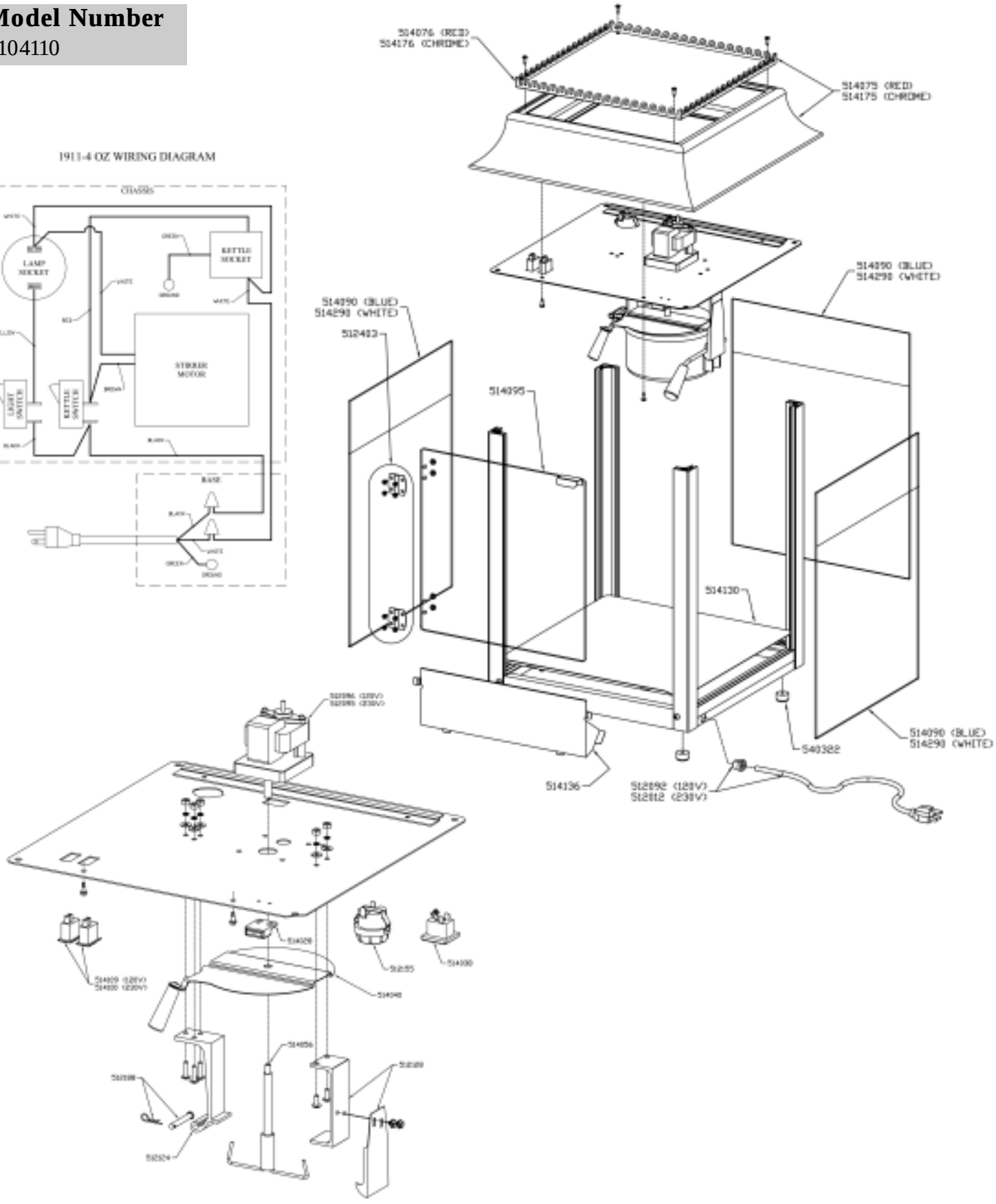
Popcorn Machine 4 oz. - Paragon 1911 Original

Model Number
1104110



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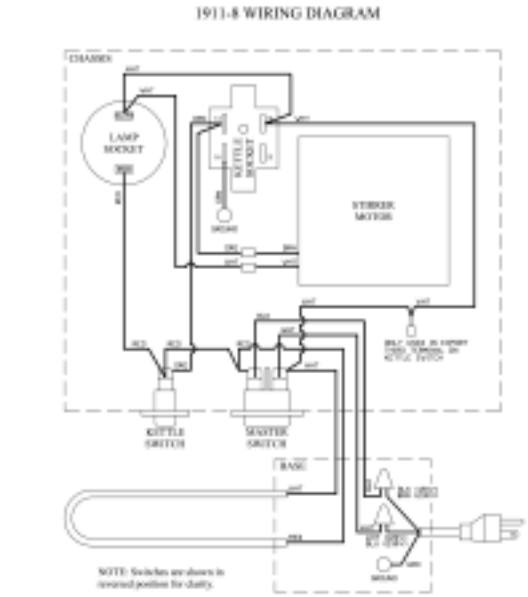
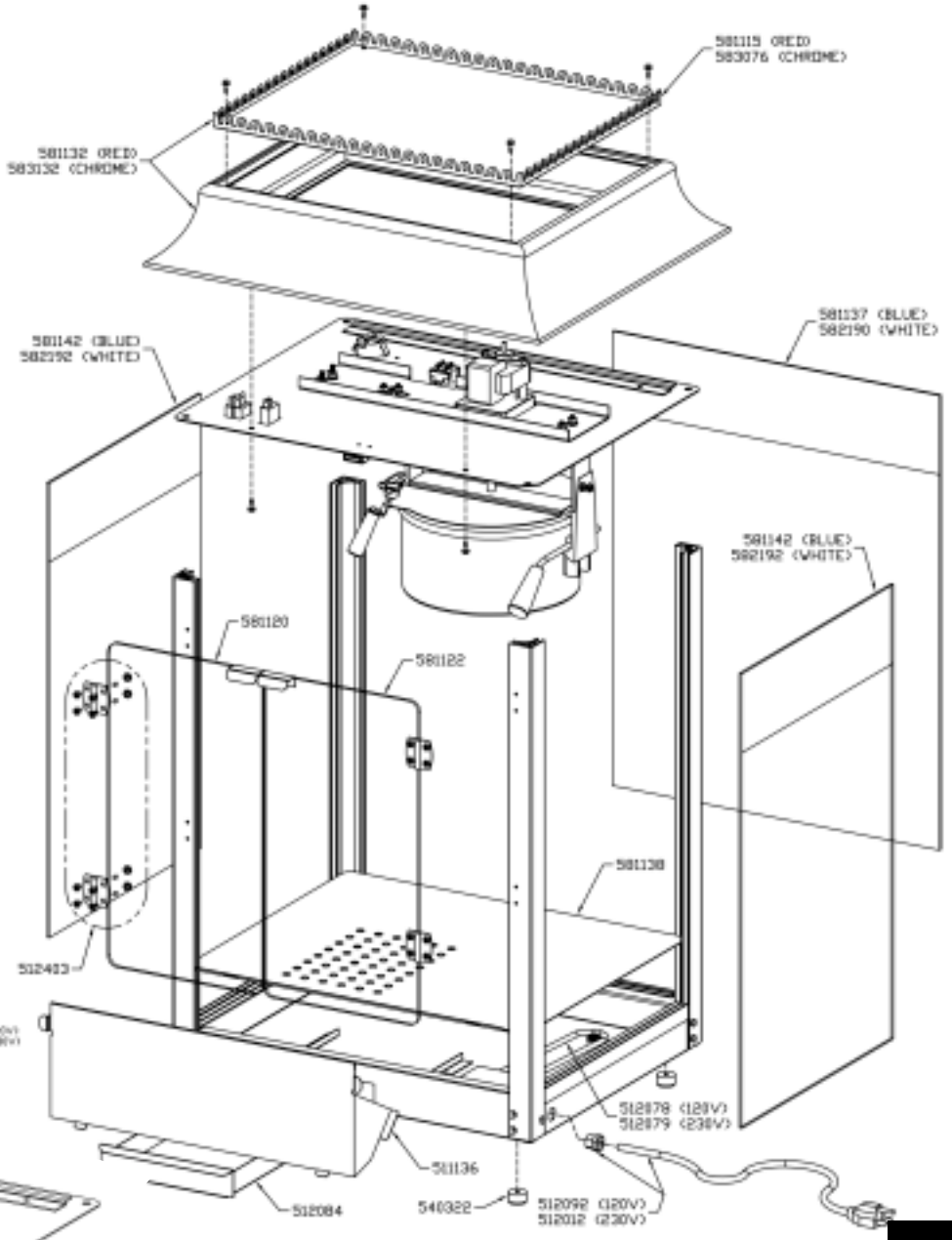
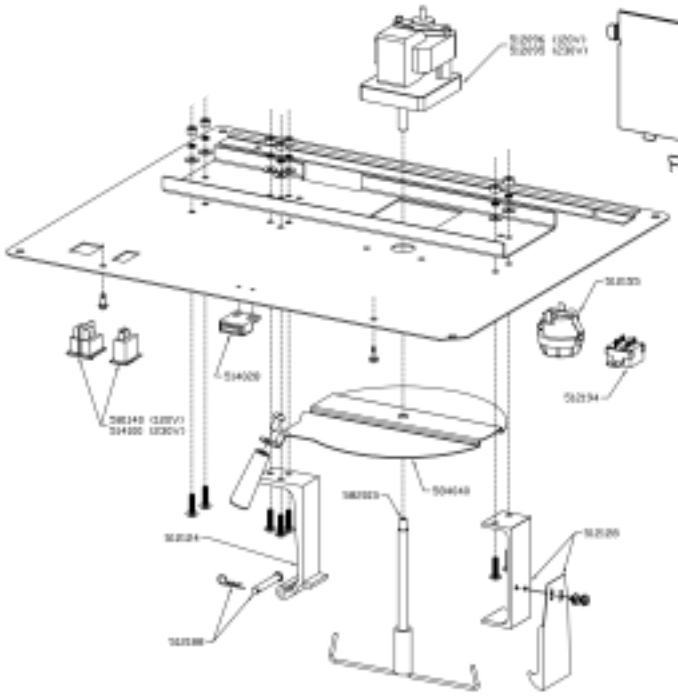
Popcorn Machine 8 oz. - Paragon 1911 Original

Model Number
1108910







Popcorn Machine 8oz.

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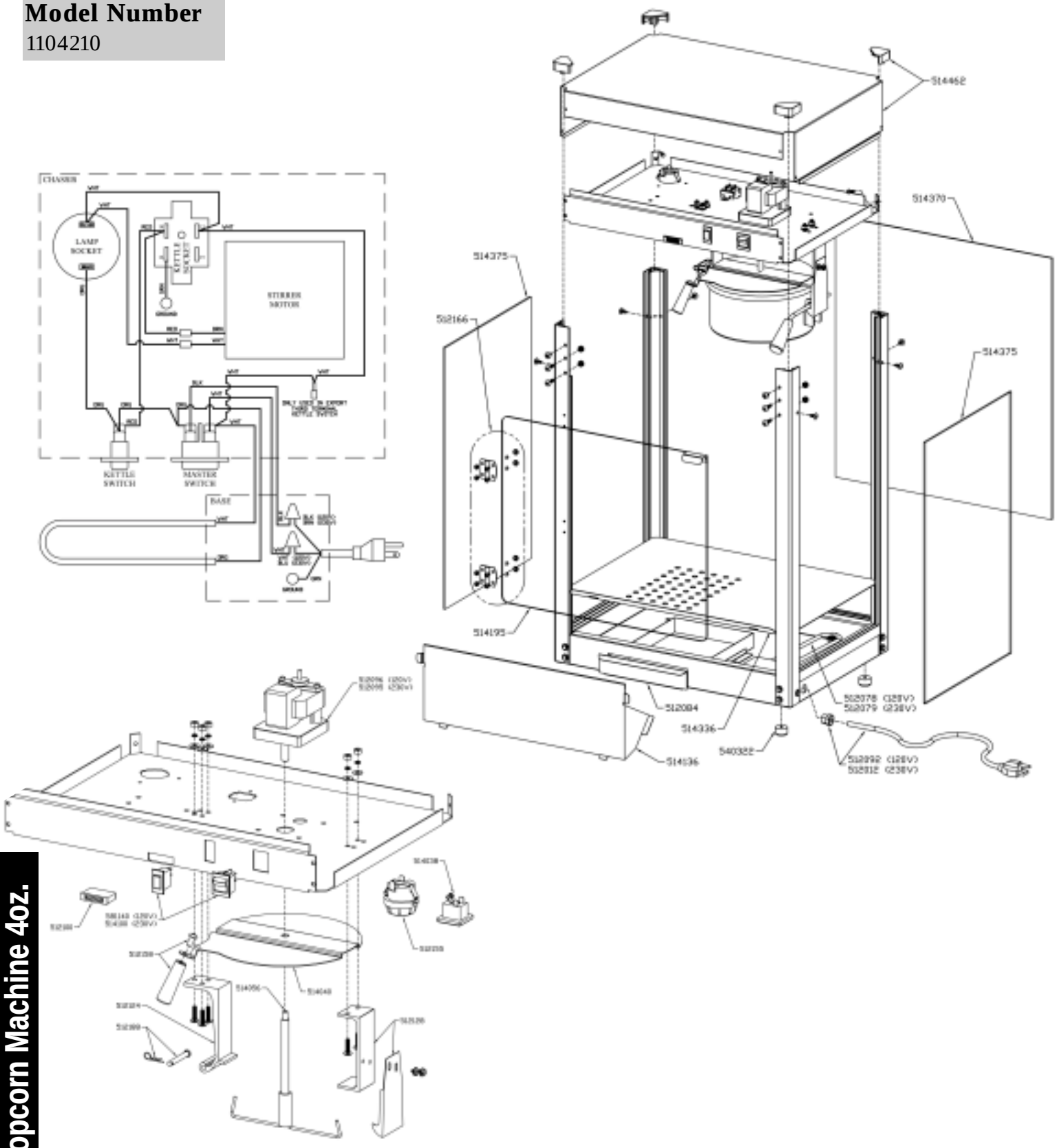
Popcorn Machine 4 oz. - Paragon Theater Pop

Model Number
1104210



Popcorn Machine 4oz.

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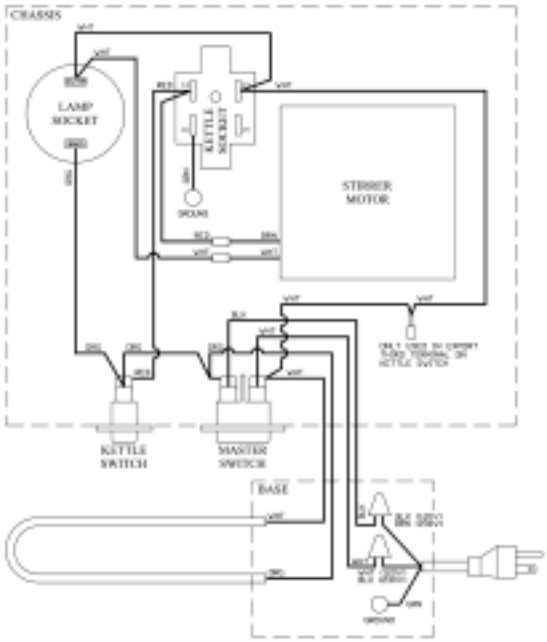
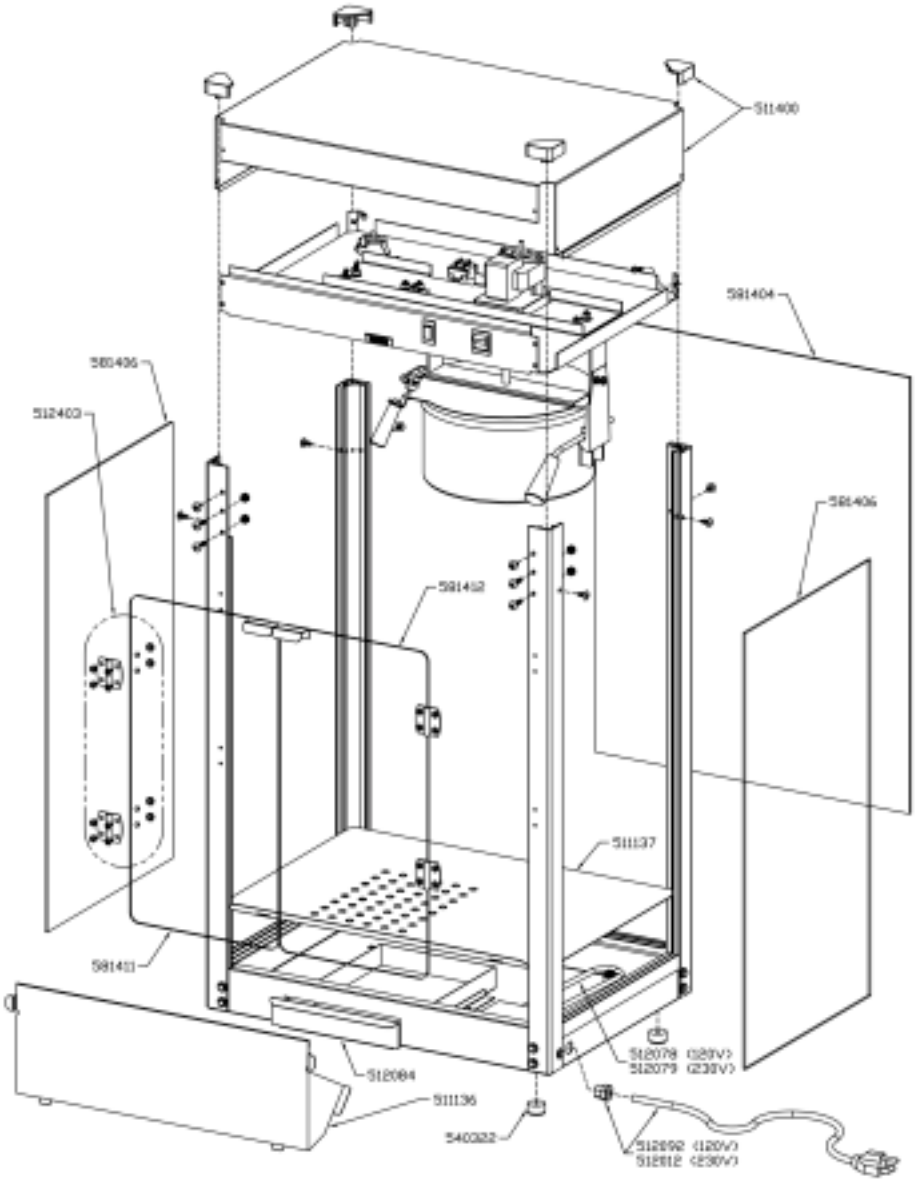
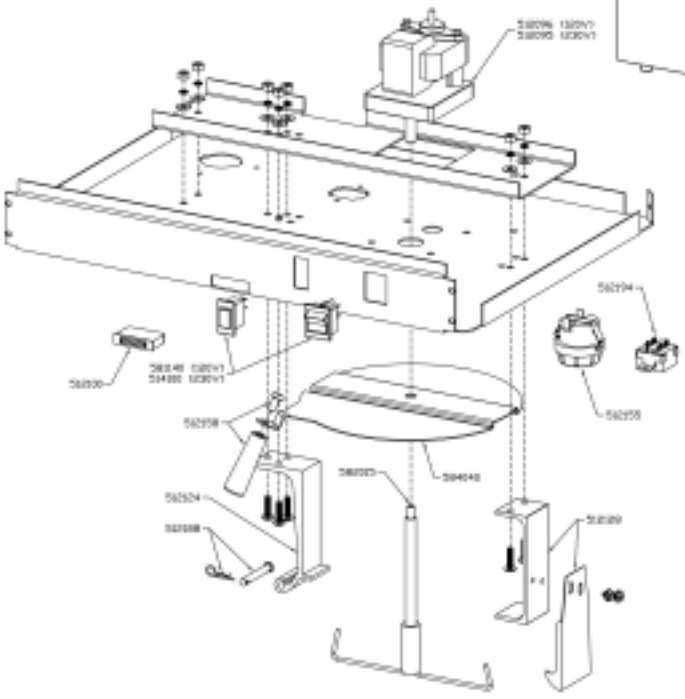
Popcorn Machine 8 oz. - Paragon Theater Pop

Model Number
1108110







Popcorn Machine 8oz.

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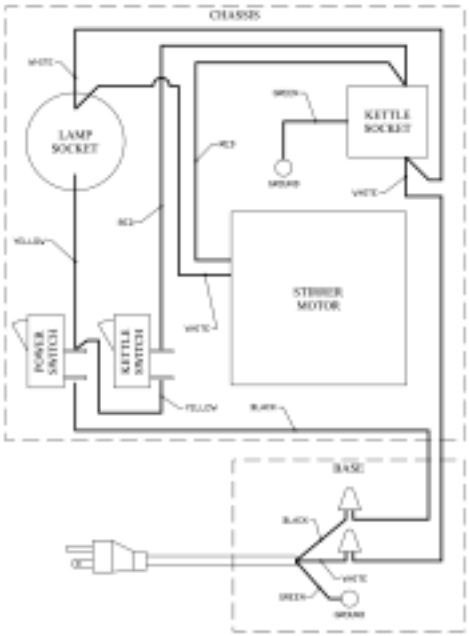
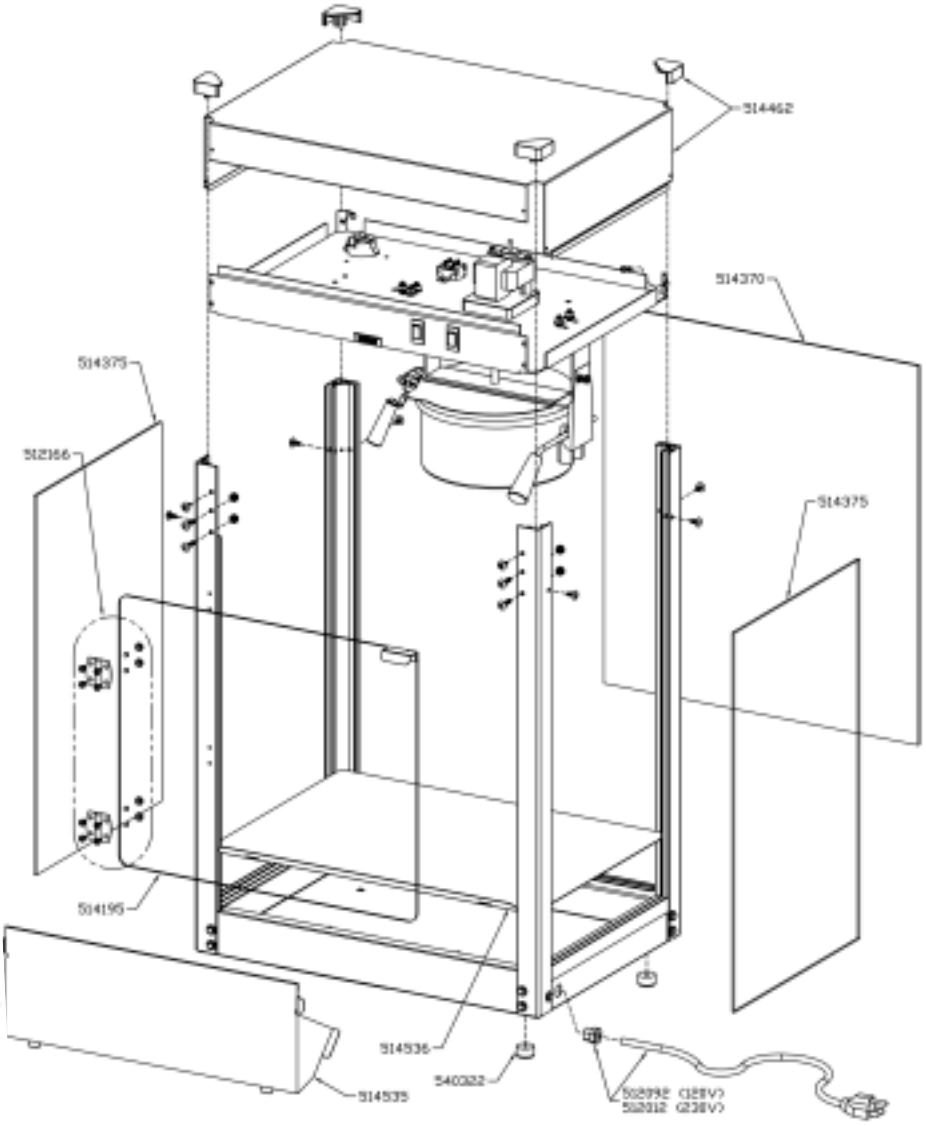
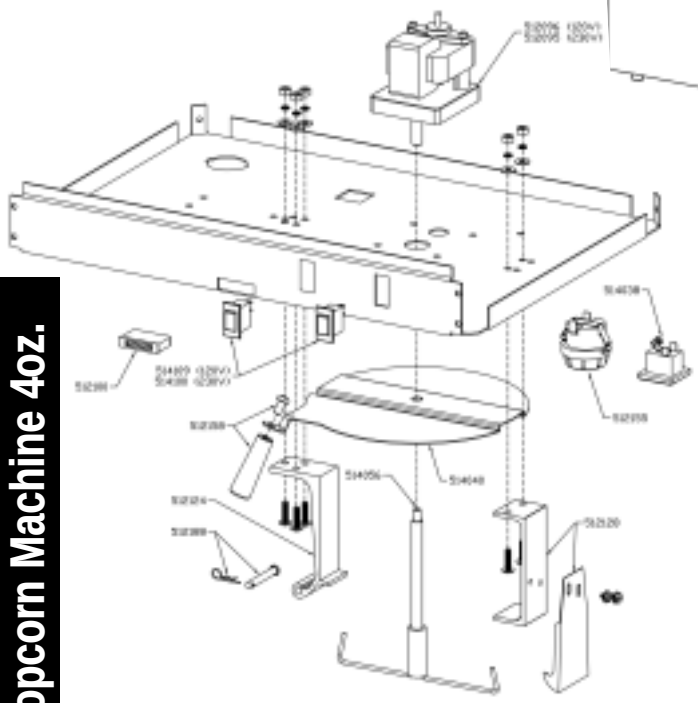
Popcorn Machine 4 oz. - Paragon Thrifty Pop

Model Number
1104510







Popcorn Machine 4oz.

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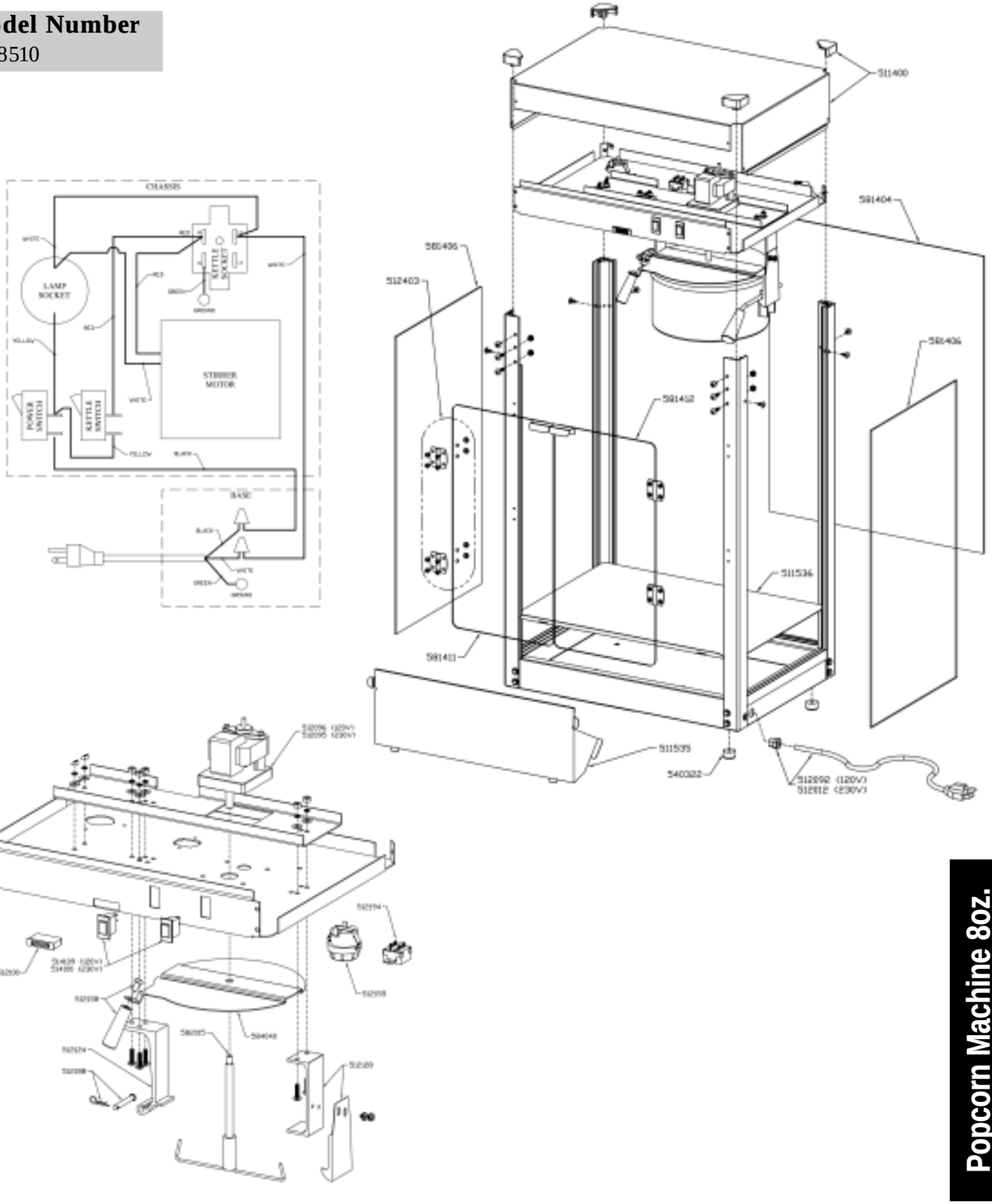
Popcorn Machine 8 oz. - Paragon Thrify Pop

Model Number
1108510



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Low Velocity Stud Drivers

Stud drivers are used for a variety of jobs. The important point to remember is to use the correct type of pin and load for the material that you are fastening. The parts that commonly go bad in a stud driver are the Piston, Piston Ring, and the Buffer. This is caused from over firing, which is usually the result of using the incorrect pin and load. For Technical Service on Remington models, you can either call the factory at (866) 672-6040 or call one of our technicians at (800) 362-6951 ext. 2.

Name Brands Include:

Boss
Masterset
Remington
Uniset
Hilti
Pneutek
Speed
Impex
Proset
Stinger
Jamerco
Ramset
Red Head

STUD DRIVER INDEX

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Stud Driver Parts

Tool No.	Description	PHP Part No.	Original Part No.
Masterset Systems	Piston w/ring	MS12312	01112
123	Piston Ring	UN20127	
	Buffer	UN20114	01114
	Nosepiece w/buffer	MS12306	01106
	Reset Pin Cap Assembly	UN40108	01108
	Piston Reset Pin	UN40107	01107
	Reset Pin Spring	UN40133	01122
Pneutek	Piston w/ring	PN15012	B-200801-2
M15 & M30	Piston Ring	PN15127	A-200404
	Buffer	PN15114	B-200316
Proset	Piston w/ring	PS30112	27567
P-30	Piston Ring	PS30127	27577
Ramset	Piston w/ring & buffer	RA41512	546981
4150	Piston Ring	RA41727	350005
	Piston Return Pawl	RA41707	546621
	Piston Pawl Cap	546625	546622
	Piston Cap Shroud	RA41723	546623
	Buffer	RA41714	546444
	Piston Pawl Spring	RA41788	329026
Stinger	Piston w/ring	ST22012	B22-16
B-22	Piston Ring	UN20127	B22-17
	Nosepiece	ST22006	B22-18
	Reset Pin	ST22407	B22-4
	Firing Pin Spring	ST22088	B22-13
	Buffer	UN20114	
660	Breech Plug .22 Caliber	ST66728	60728

Impex Stud Driver Parts

Tool No.	Description	PHP Part No.	Original Part No.
Impex Tool			
JR-35	Piston FK W/ring	IM35012	3504FK
	Piston KK w/ring	IMR3512	3504AKK
	Piston Ring	IM75027	7506
	Nose Piece	IM35006	3501
	Piston Return Pawl	IM35007	3513
	Pawl Spring	IM35088	3514
	Pawl Cap	IM35108	3515
LG-65	Piston FK	IM65212	6513FK
	Piston KK	IMR6512	6513AKK
	Piston Ring	IM65227	6510
	Barrel Pawl	IM65007	6547
	Firing Pin Return Spring	IM65023	6523
	Firing Pin	IM65025	6525
	Firing Pin Compression Spring	IM65026	6526
	Trigger Return Spring	IM65028	6528
	Firing Pin Tang Spring	IM65038	6538
	Carrier Return Spring	IM65042	6542
	Cartridge Clip Carrier Claw	IM65043	6543
	Circlip	IM65075	6578
	Trigger Gear	IM65078	6578
	Trigger Gear Rubber Spring	IM65079	6579
	Barrel Pawl Spring	IM65088	6548
	Barrel Pawl Cap Screw	IM65108	6546
	Nosepiece (65.2)	IM65206	6591
	Nosepiece Clip (65.2)	IM65244	6595
	Nosepiece (65.3)	IM65306	6591A
	Nosepiece Clip (65.3)	IM65344	6595A
JR-75	Piston FK w/ring	IM75012	7504FK
	Piston KK w/ring	IMR7512	7504AKK
	Piston Ring	IM75027	7506
	Nosepiece	IM75006	7501
	Piston Return Pawl	IM75007	7513
	Ejector Block	IM75019	7519
	Firing Pin Spring	IM75030	7530
	Trigger	IM75033	7533
	Trigger Spring	IM75034	7534
	Steel Ball	IM75040	7540
	Pawl Spring	IM75088	7514
	Pawl Cap	IM75108	7515
	Sear Spring	IM75127	7527
	Nosepiece Clip	IM75344	7503

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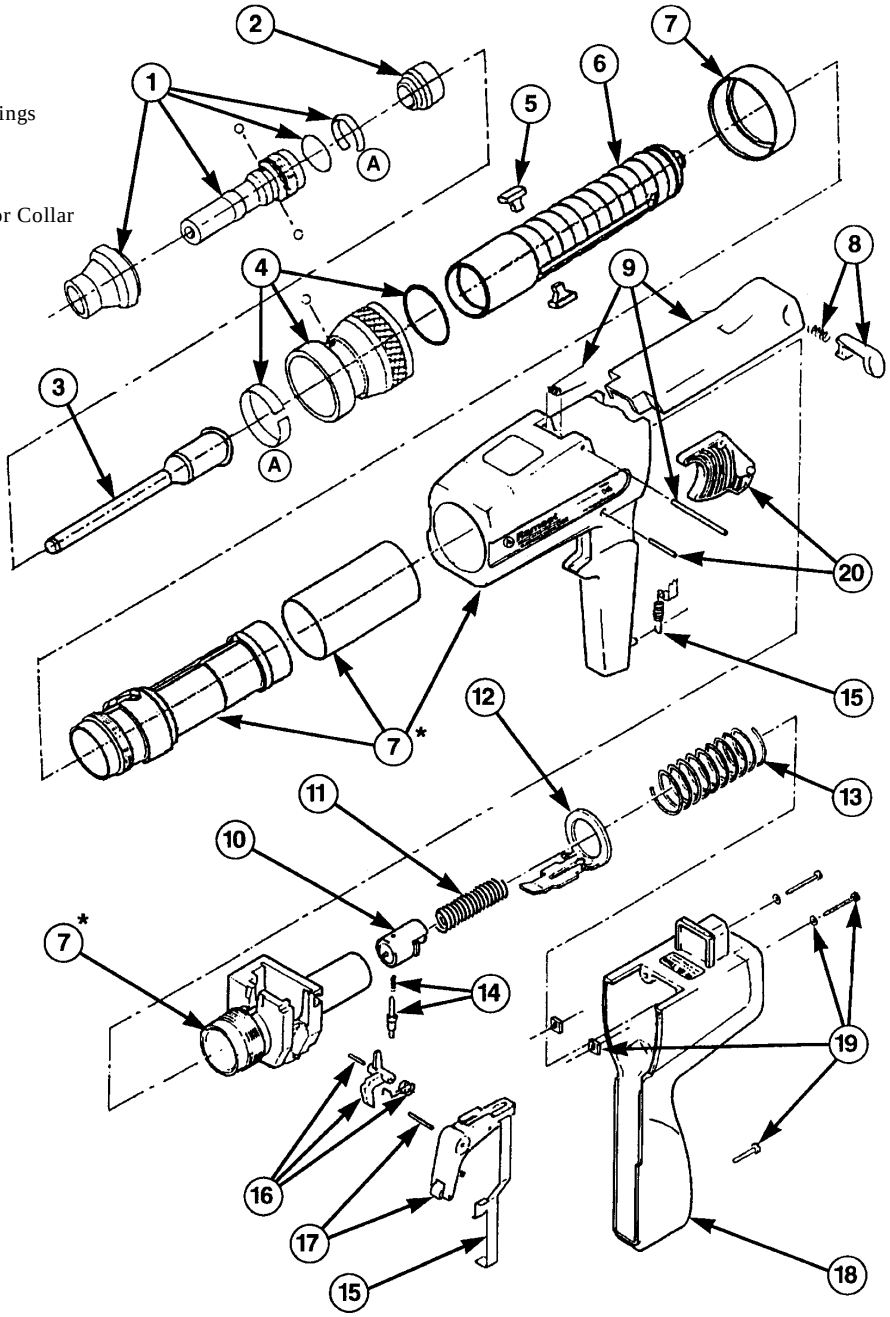
Ramset Stud Driver Model D45

Key No.	Part No.	Description
1	323300	Muzzle Bushing Assembly
1A	323050A	Barrel Retention Clip & Bearings
2	316520	Buffer (3)
3	30645	Piston
4	323310	Barrel Retention Collar
4A	312590A	Retention Ring & Bearings for Collar
5	316540	Pawl (2)
6	323330	Barrel Assembly
7*	323340	Receiver Assembly
8	308490	Latch Button Assembly
9	13510	Cover Assembly
10	307890	Firing Pin Assembly
11	13513	Firing Pin Spring
12	307920	Cocking Slide
13	13515	Cocking Slide Spring
14	308870	Firing Pin Pawl & Spring
15	13518	Indexing Lever & Spring
16	13516	Trigger Lock Assembly
17	13517	Sear Assembly
18	309280	Rear Handle Assembly
19	308860	Rear Handle Screws & Nuts
20	13509	Trigger & Pin
21	12266	Spall Guard (not shown)

*All one assembly



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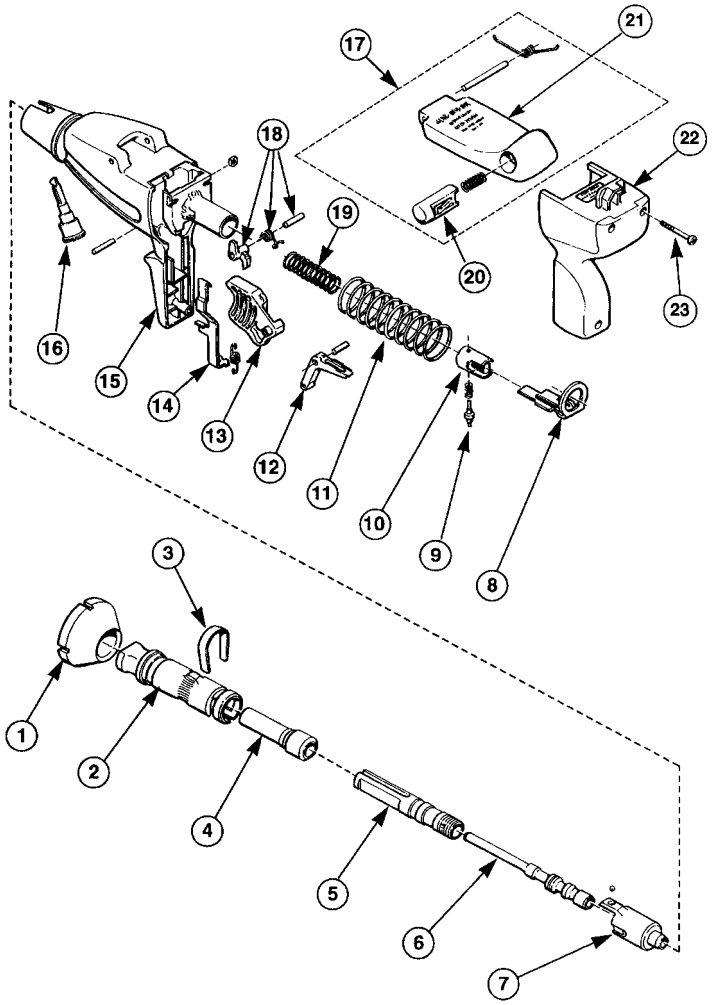
Ramset/Red Head Stud Driver Model D60

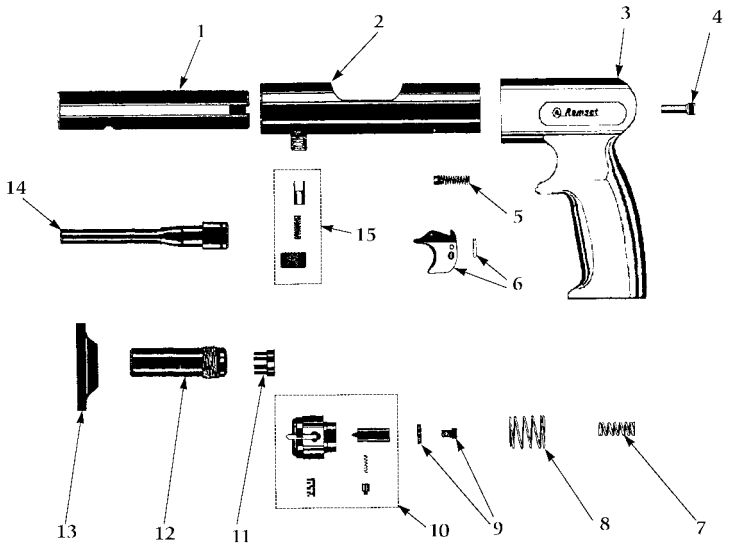
Key No.	Part No.	Description
1	5466405	Spall Guard
2	13500	Outer Barrel Shroud
3	RAD6044	Outer Barrel Clip
4	30663	Standard Muzzle Bushing
5	13504	Rear Barrel
6	30691	Piston Assembly
7	13505	Load Chamber Assembly
8	307920	Cocking Slide
9	308870	Firing Pin Pawl & Spring
10	307890	Firing Pin Assembly
11	13515	Cocking Slide Spring
12	13517	Sear Assembly w/Pin
13	13509	Trigger and Pin
14	13518	Load Indexing Lever & Spring
15	309500	Receiver Assembly
16	135220	Pawl Assembly
17	13510	Cover Assembly
18	13516	Trigger Lock Assembly
19	13513	Firing Pin Spring
20	308490	Latch Button Assembly
21	30604	Cover (Included in #17)
22	309280	Rear Handle Assembly
23	308860	Rear Handle Screws & Nuts
24	13521	Barrel Retention Ball & Ring*
25	30852	Narrow Access Outer Barrel**(D60L)
26	30853	Narrow Access Muzzle Bushing**(D60L)
27	306880	Long Outer Barrel (D60L)**
28	306890	Long Muzzle Bushing (D60L)**
29	21108	Piston Ring (Solid Style)*

* Not Shown
**Not Shown- Must be used only as a set



Ramset Stud Driver Model 70

Key No.	Part No.	Description
1	53202	Barrel
2	53300	Receiver Assembly
3	53370A	Handle Assembly (Includes screws)
4	53380	Handle Screws (2)
5	53360A	Trigger Spring Assembly
6	53310A	Trigger Assembly
7	53330	Firing Pin Spring
8	53340	Breech Block Spring
9	53350A	Firing Pin Screw Assembly
10	53320A	Breech Block Assembly
11	53109	Buffer
12	53101	Muzzle Bushing
13	53104	Spall Guard
14	53201	Piston Assembly
15	53115A	Pawl Assembly



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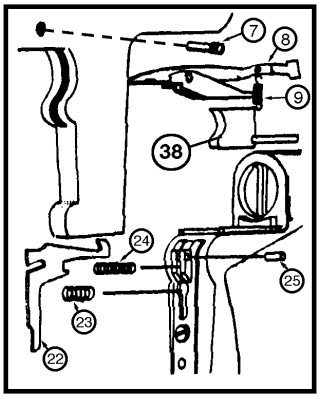
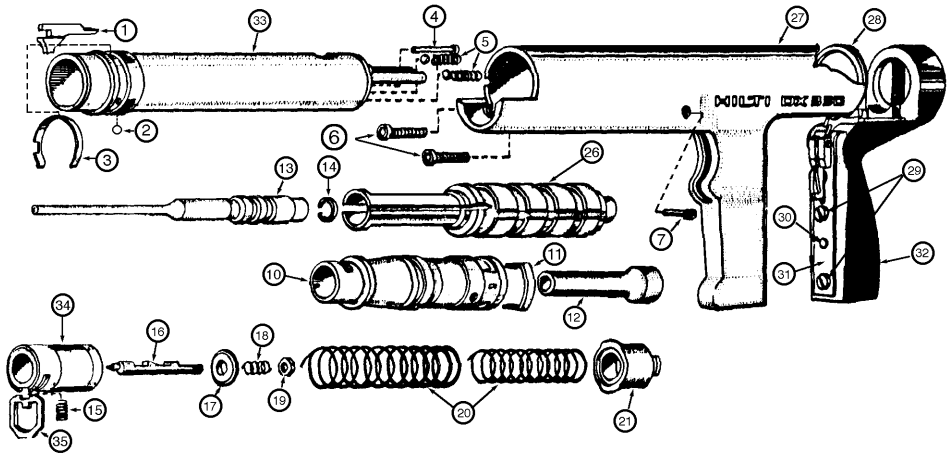
Impex - Jamerco Stud Driver Parts

Tool No.	Description	PHP Part No.	Original Part No.
Impex Tool			
HG-100	Piston w/ring #10 FK Standard	IM10012	1014FK
	Piston w/ring #8 FK	IM10812	1014BFK
	Piston w/ring #8 KK	IMR1812	1014AKK
	Piston Ring	IM10027	1016
	Nosepiece #10 MM Standard	IM10011	1011
	Metal Crush Ring	IM10014	1012
	Dowel Pin	IM10021	1021
	Ram Rod Loading Tool	IM10025	1025
	Barrel Stop Screw/Washer	IM10028	1028
	Ejector Block	IM10032	1032
	Steel Ball Spring	IM10034	1034
	Firing Pin Sear	IM10036	1036
	Firing Pin Sear Spring	IM10037	1037
	Firing Pin	IM10039	1039
	Firing Pin Spring	IM10040	1040
	Trigger Return Spring	IM10050	1050
	Roll Pin	IM10051	1051
	Handle Screw	IM10054	1054
	Rubber Stabilizer	IM10099	1006
	Barrel Stop	IM10127	1027
Jamerco Tools			
JT-100	Piston w/ring	JA10012	1023
	Piston Ring	UN20127	1024
	Piston Tang	JA10017	1017
	Piston Tang Spring	JA10018	1018
	Piston Tang Cap	JA10019	1019

Hiliti Stud Driver Model DX350





Key No.	PHP Part No.	Original Part No.	Description
1	301012	0350849	Stop
2	301013	0350851	Annular Ball, 6 MM.
3	301014	0350850	Annular Spring
4	DX35847	0350847	Pressure Pin
5	DX35480	5017881	
		0035970	Ball & Spring Kit
6	DX35924	5017924	Frt. Allen Cap Screw
7	301034	0350974	Threaded Pin
8	301906	0350986	Advancer Lever
9	301531	0350988	Adv. Lever Spring
10	301009	0350118	Base Plate 2/S-13
11	301011	0350832	Shear Clip
12	301010	0350403	Guide 2/F-3
13	301903	0350202	Piston 2/DN-1
14	301208	0350856	Piston Ring
15	301024	0350853	Sear Spring
16	301904	0350843	Firing Pin
17	UN40112	0350844	Spring Detent
18	DX35388	0350916	F.P. Return Spring
19	DX35914	0350914	F.P. Nut
20	*DX35780	0350855	
		0350854	Spring Kit (Rear)
21	DX35846	0350846	End Cap
22	DX35041	0350841	Release Lever
23	DX35050	0350950	Return Spring
24	301840	0350852	Compression Spring
25	DX35058	0402958	Dowell Pin
26	301006	0350837	Piston Guide
27	DX35015	0350839	Housing
	DX35999		Generic Housing
28	DX35048	0350848	Retaining Ring
29	DX35940	0350940	Cheese Head Screw
30	DX35905	0350905	Allen Screw
31	DX35040	0350840	Support Strip Assy.
32	DX35045	0350845	Rubber Grip
33	DX35835	0350835	STL Liner Assy.
34	DX35838	0350838	Spring Guide Assy.
35	DX35842	0350842	Sear
38	301533	0350842	Trigger
	DX35978	0023978	Base Plate 2/S 14-1
	DX35044	0023044	Guide 2/F-4
	DXF3512		Piston Flat End
	DXR3512		Piston Round End

**These items are cheaper if you purchase them separately.*
Part #'s 301026 & 301025

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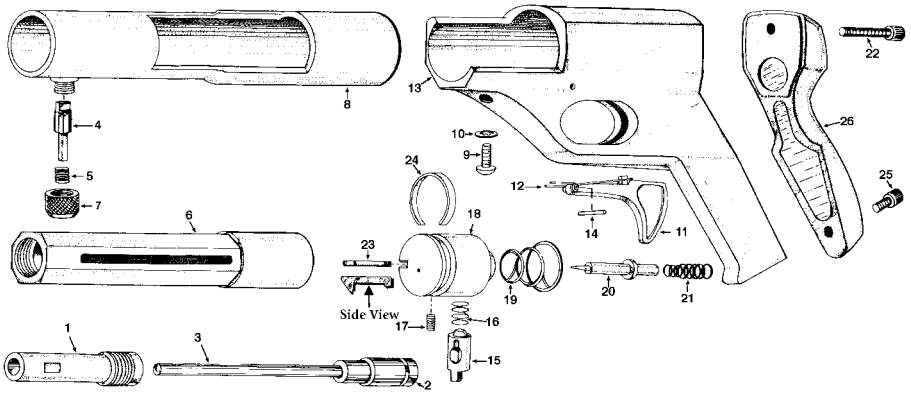
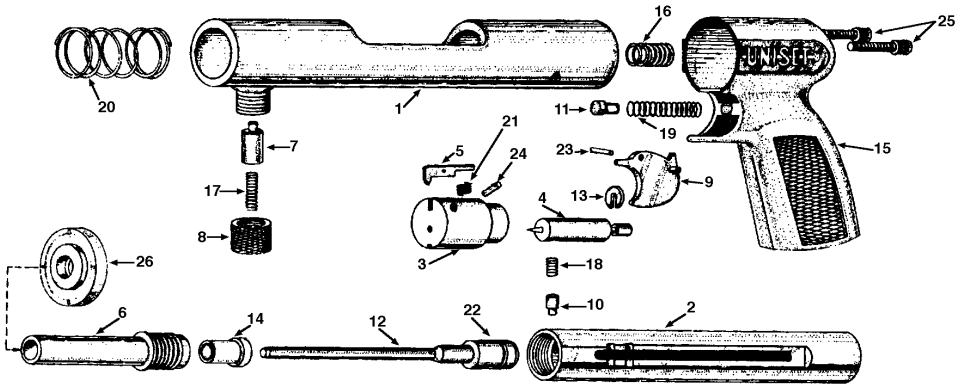
Stud Drivers: Speed 475A, 475, Boss 75K-2, 75K-1



Item No.	PHP Part No.	Original Part No.	Description	Item No.	PHP Part No.	Original Part No.	Description
1	SP44006	4403A	Plunger housing 3"	16	SP47322	4322	Sear spring
	SP44256	4403S	Plunger housing 21/2"	17	SP47323	4323	Set screw
2	UN20127	4306A	Piston ring	18	N/A	4324	F.P. housing
3	SP47A12	4406	Piston	19	056215	4325	F.P. housing spring
4	SP47507	4307A	Piston tang	20	SP47327	4327	Firing pin
5	SP47588	4308A	Tang Spring	21	SP47328	4328	F.P. spring
6	SP47A09	4409A	Barrel	22	054859	4332	Handle screw, lg
7	SP47508	4310A	Tang cap	23	SP47333	4333	Ejector
8	N/A	4411	Barrel housing	24	SP47334	4334	Ejector spring
9	054856	4316	Handle screw	25	054856	4340	Handle screw, short
10	SP47316	4316A	Lock washer	26	054854	4341	Rubber cushion
11	075144	4317	Trigger assy.			SPEED 475 & BOSS 75K-1	
12	SP47518	4317S	Trigger spring	1	SP43006	4303B	Nose piece 11/2"
13	078506	4318	Handle	2	UN20127	4306A	Piston ring
14	SP47519	4319A	Hinge pin	3	SP47512	4306	Piston
15	095153	4321	Sear			Barrel & barrel housing N/A	

Stud Drivers: Uniset U1500, Uniset U2000



If there is no part number, there is still a possibility that we can get the part. Call with Model # and description.

Item No.	U2000 No.	U1500 No.	Description	Item No.	U2000 No.	U1500 No.	Description
1	8101	A101	Receiver	14	UN20114	UN20114	Buffer
2	8102	A102	Barrel	15	8115	A115	Handle
3	8103	A103	Breechblock	16	UN20121	UN20121	Firing pin spring
4	UN20104	UN20104	Firing pin	17	UN20122	UN40133	Reset pin spring
5	UN20105	N/A	Extractor	18	8123	8123	Sear pin spring
6	UN20106	UN15106	Nose piece	19	8124	8124	Trigger spring
7	UN20107	UN40107	Piston reset pin	20	8125	8125	Firing mech spring
8	UN20108	UN40108	Reset pin cap	21	UN20126	RH72727	Extractor spring
9	8109	8109	Trigger	22	UN20127	UN30127	Piston ring
10	UN20111	UN20111	Sear pin	23	8128	8128	Trigger hinge pin
11	8111	8111	Trigger spring cap	24	8128	8128	Extractor pin
12	UN20112	UN15112	Piston	25	8130	8130	Handle bolts
13	UN20113	UN20113	Firing pin collar	26	058972	058972	Spall guard

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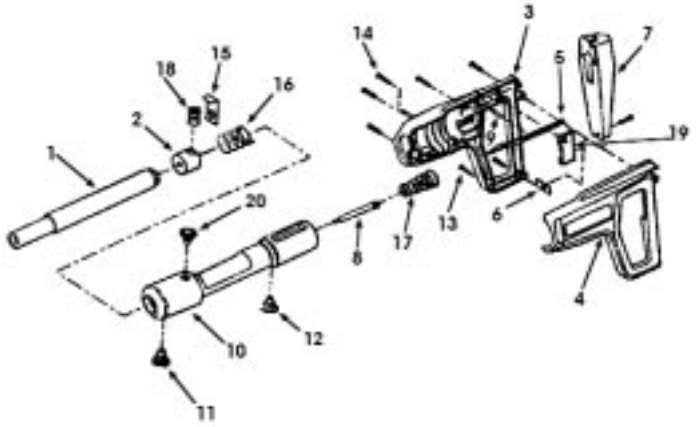
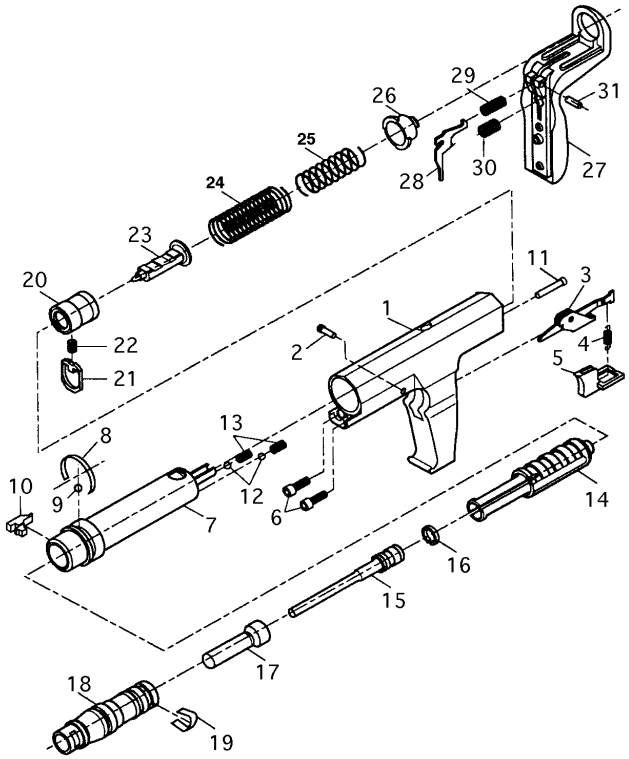
Remington Stud Driver Models 480, 489, 490

Key No.	Part No.	Description
1	TA4080	Barrel, Piston Assy
2	076659	Breech
3	076620	Housing, Handle, Right
4	076630	Housing, Handle, Left
5	078334	Link, Trigger
6	076943	Nut, Pad Recoil
7	098679-01	Pad Recoil
8	075370	Firing Pin
9	044279	Spring Pin
10	077180	Assy Receiver (480)
	098720-02	Assy Receiver (489)
	098720-01	Assy Receiver (490)
11	055436	Barrel Screw
12	077183	Breech Screw
13	076674	Housing Screw
14	077277	Housing Screw
15	076657	Sear
16	077191	Breech Spring
17	056217	Firing Pin Spring
18	056218	Sear Spring
19	076671	Trigger
20	077708	Pressure Pad Assy.
Optional Accessories		
	058972	Spall Shield
	056485	Brush, 1/4"
	056486	Brush, 5/8"



Remington Models 491, 493

Key No.	Part No.	Description
1	301002	Body
2	301034	Trigger Pin
3	301906	Advance Bar Assy
4	301531	Advance Bar Spring
5	301533	Trigger
6	301015	Screw
7	301100	Liner
	305100	Liner (493)
8	301014	Annular Spring
9	301013	Ball Bearing
10	301012	Stop
11	301016	Push Pin
12	301046	Ball Bearing
13	301047	Spring
14	301006	Piston Sleeve for 491
	305006	Piston Sleeve for 493
15	301903	Piston Assy (Includes Piston & Ring)
16	301208	Piston Ring
17	301010	Guide
	305010	Guide 493
18	301009	Base Plate
19	301011	Shear Clip
20	301300	Sear Holder
21	301023	Sear
22	301024	Sear Spring
23	301904	Firing Pin Assy.
24	301026	Sear Holder Spring
25	301025	Firing Pin Spring
26	301028	Plug
27	301601	Rubber Pad
28	301844	Rock Arm
29	301840	Spring
30	301843	Spring
31	301845	Rock Arm Pin
Optional Accessory		
	TA4050	Guide for 3" Power Fasteners (491 only)
	301053	Spall Shield



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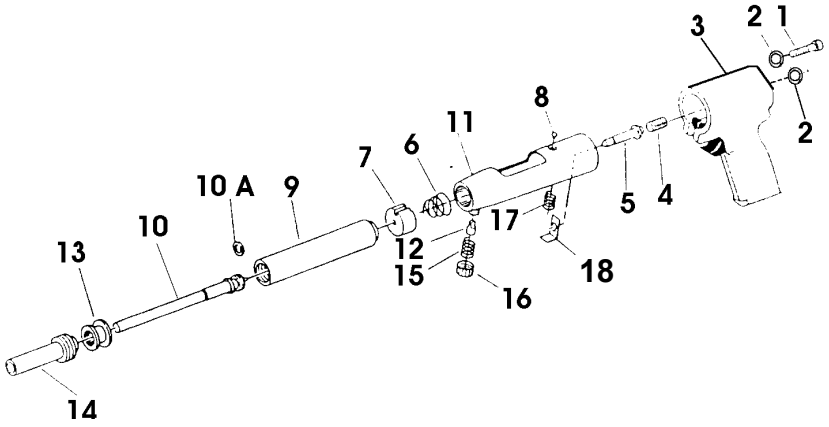
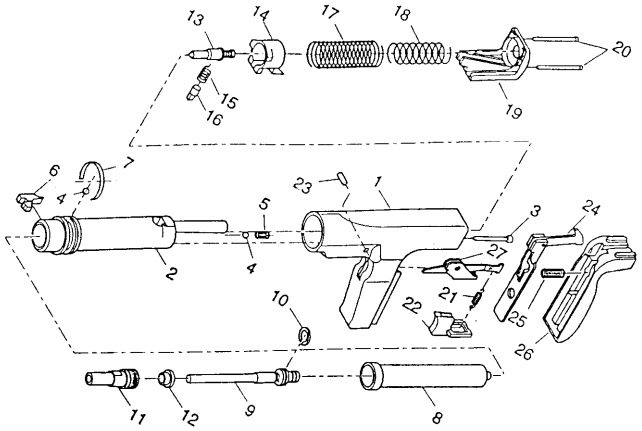
Remington Stud Driver Model 494

Key No.	Part No.	Description
1	101123-01	Screw, 1/4"-20 x 1.25 (2)
2	101122-01	Washer (2)
3	101128-01	Handle & Trigger Assy.
4	056217	Firing Pin Spring
5	075370	Firing Pin
6	101148-01	Breech Spring
7	100858-01	Breech
8	101124-01	Stop Pin
9	101127-01	Barrel and Insert Assy
10	101126-01	Piston and Ring Assy
10A	101439-01	Piston Ring
11	100856-01	Receiver Assembly
12	100864-01	Tang
13	TA4083	Buffer (5) pack
14	100857-01	Muzzle Cap
15	101147-01	Tang Spring
16	100862-01	Tang Cap
17	056218	Sear Spring
18	076657	Sear
Optional Accessories		
	101320-02	Spall Shield
	056415	Goggles
	056485	Brush, 1/4"
	056486	Brush, 5/8"
	103754	Hex Wrench, 3/16"



Remington Stud Driver Models 495, 496



Key No.	Part No. 495	Part No. 496	Description
1	501001	502001	Housing
2	501100	502100	Outer Assembly Liner
3	501104	501104	Push Pin
4	301013	301013	Ball Bearing
5	501106	501106	Spring Ball Set
6	501107	501107	Key Stop
7	301014	301014	Annular Spring
8	501200	502200	Barrel
9	501201	502202	Piston Assembly (includes O ring)
10	501212	501212	Ring
11	501213	502215	Muzzle Cap
12	TA4086	TA4086	Plastic Buffer (5 Pack)
13	501300	501300	Firing Pin Assembly (Includes pin,spring,nut,washer)
14	501317	501317	Firing Pin Guide
15	301047	301047	Spring
16	501319	501319	Sear
17	501320	501320	Spring
18	501321	501321	Safety Spring
19	501422	501422	Rear Pad
20	501423	501423	Bolt
21	301531	301531	Advance Spring
22	301533	301533	Trigger
23	501526	501526	Trigger Pin
24	501600	502600	Rocker Arm Assembly (Includes rocker arm,rocker arm pin, and rocker arm holder)
25	501733	501733	Rocker Arm Spring
26	501700	501700	Handle Pad Assembly
27	501500	501500	Advance Assembly (holder,bar,tube)

Optional Accessories

TA4095	Muzzle Cap for 3"
101320-02	Spall Shield
056486	Brush, 5/8

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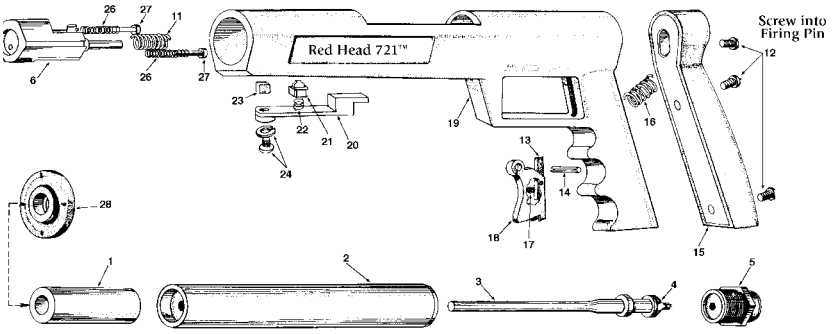
Ramset/Red Head Stud Driver Model 721

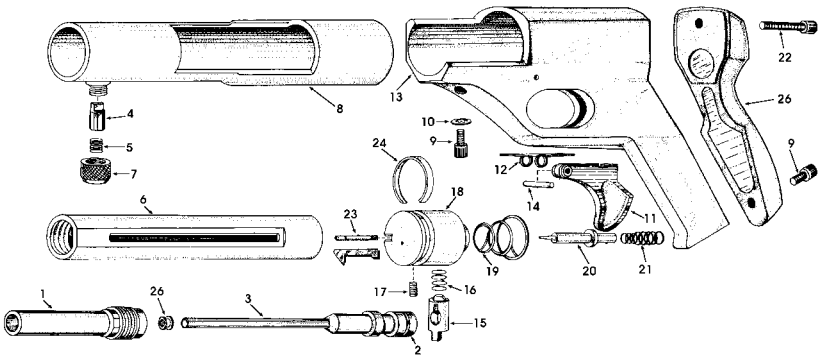


Key No.	PHP Part No.	Original Part No.	Description
1	RH72106	12258	Barrel Extension
2	RH72108	12108	Barrel Assembly
3	RH72112	33657	Piston W/Ring
4	RH72727	33665	PIston Ring
5	RH72150	33650	Breech Plug
6		33640	Breech Block
7	RH72185	12085	Firing Pin
8	RH72149	81649	Sear
9	RH72671	33671	Sear & Trig Bar Roll Pin
10	RH72659	33659	Sear Spring
11	RH72658	33658	Firing Pin Spring
12	RH72674	33674	Handle & Firing Pin Screw
13		33667	Trigger Bar
14		12476	Trigger Roll Pin
15		81681	Rubber Handle
16		33647	Trigger Spring
17		33668	Trigger Bar Spring
18		33646	Trigger
19		22101	Handle Assembly
20	RH72088	22088	Stop Pin Cover
21	RH72107	33645	Barrel Stop Pin

Key No.	PHP Part No.	Original Part No.	Description
22	RH72188	12388	Barrel Stop Pin Spring
23	RH72179	33679	Rubber Bumper
24	RH72198	22790	Stop Pin Cover Screw Assy.
25	RH72123	12260	Barrel Set Screw
26	RH72642	33642	Breech Block Spring
27	RH72641	33641	Breech Spring Pin
28	UN20142	12266	Spall Guard

Remington Stud Driver Models 472, 473, 482, 483

If there is no part number , there is still a possibility that we can get the part. Call with Model # and description.



Key No.	473	482	Description
1	059850	102620	Muzzle Cap 2 1/2"
2	058971	058971	Piston Ring
3	078612	078613	Piston W/Ring
4	055977	055977	Piston Tang
5	055448	055448	Tang Spring
6	056439	076998	Barrel
7	056212	056212	Tang Cap
8	056441	076690	Receiver
9	054856	054856	Handle Screw, Short (2)
10	WLI-4C	WLI-4C	Lock Washer
11	075144	075144	Trigger Assembly
12	056209	056209	Trigger Spring
13	078506	078506	Handle Housing
14	045918	045918	Hinge Pin
15	095153	095153	Sear
16	056218	056218	Sear Spring
17	054859	054859	Set Screw
18	075369	075369	Breech
19	056215	056215	Breech Spring
20	075370	075370	Firing Pin
21	056217	056217	Firing Pin Spring
22	054857	054857	Handle Screw, Long
23	075373	075373	Ejector
24	056216	056216	Ejector Spring
25	054854	054854	Rubber Cushion
	056438	075961	Muzzle Cap 3"
	058972	058972	Spall Shield
26	N/A	096109	Buffer (5)

1 1/2" Tool Only Remington™ 472 & 481

Key No.	472	481	Description
1	058973	058973	Muzzle Cap
2	058971	058971	Piston Ring
3	078611	078611	Piston W/Ring
6	055975	076670	Barrel
8	077549	077549	Receiver

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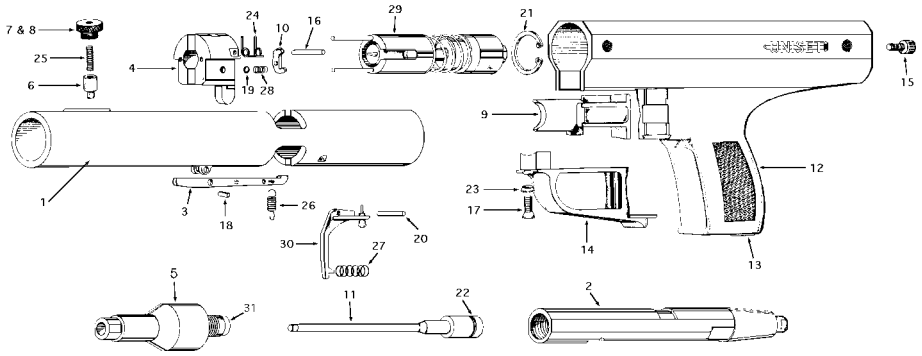
Red Head Stud Drivers

Tool No.	Description	PHP Part No.	Original Part No.
823	Piston w/ring	RH82312	21106
	Piston Ring	RH72727	21108
	Barrel Extension Screw	RH72123	12260
	Sear	RH72149	81649
	Firing Pin	RH72185	12085
	Breech Block Spring Pin (each)	RH72641	33641
	Breech Block Spring (each)	RH72642	33642
	Firing Pin Spring	RH72658	33658
	Sear Spring	RH72659	33659
	Sear & Trigger Bar Pin	RH72671	33671
	Handle Screw (each)	RH72674	33674
	Barrel Extension 5/16	RH82306	18355
	Piston Return Dog	RH82307	19260
	Return Dog Set Screw	RH82309	17109
	Ejection Handle Screw	RH82375	12075
	Return Ring Set Screw	RH82376	18376
	Spall Guard	UN20142	12266
R-300	Piston w/ring	RH30012	30725
	Piston Ring	RAD7527	21108
	Cam Return Screw	RH30010	30810
	Buffer	RH30014	90511
	Barrel Stop Pin	RH30030	30730
	Load Advancer Lever	RH30040	30140
	Advance Lever Spring	RH30070	30470
	Barrel Stop Pin Spring	RH72188	12388
	Barrel Extension 5/16	RH72706	90509
	Spall Guard	UN20142	12266

Tool No.	Description	PHP Part No.	Original Part No.
330	Breech Plug .22 Cal.	ST66728	60728
727	Piston w/ring	RH72712	90522
	Piston Ring	RH72727	21108
	Buffer	RH30014	90511
	Stop Pin Cover	RH72088	22088
	Barrel Stop Pin	RH72107	33645
	Sear	RH72149	81649
	Rubber Bumper	RH72179	33679
	Firing Pin	RH72185	12085
	Barrel Stop Pin Spring	RH72188	12388
	Barrel Stop Pin Cover Screw		22798
	& Lock Washer	2279022798	22790
	Breech Block Spring Pin (each)	RH72641	33641
	Breech Block Spring (each)	RH72642	33642
	Firing Pin Spring	RH72658	33658
	Sear Spring	RH72659	33659
	Sear & Trigger Bar Pin	RH72671	33671
	Handle Screw (each)	RH72674	33674
	Barrel Extension 5/16	RH72706	90509
	Spall Guard	UN20142	12266

Uniset M4000 Stud Driver



Key No.	Part No.	Description
1	UN40101	Receiver
2	UN40102	Barrel
3	UN40105	Advancer Lever
4	UN40106	Strip Block
5	UN30106	Nose Piece Assembly
6	UN40107	Reset Pin
7	UN40108	Reset Pin Cap
8	UN40140	"O" Ring
9	UN40109	Trigger
10	UN40111	Cocking Lever
11	UN20112	Piston

Key No.	Part No.	Description
12	UN401151	Handle
13	UN401152	Handle Button
14	UN401153	Trigger Guard
15	UN40120	Handle Bolt
16	UN40121	Cocker Pin
17	UN40122	Trigger Guard Screw
18	UN40123	Advancer Pin
19	UN40124	Ball Bearing
20	UN40125	Sear Lever Pin
21	UN40126	Retainer Ring
22	UN20127	Piston Ring

Key No.	Part No.	Description
23	UN40129	Lockwasher Zinc
24	UN40132	Recocker Spring
25	UN40133	Reset Pin Spring
26	UN40134	Adv. Lever Spring
27	UN40135	Trigger Return Spring
28	UN40136	Strip Ball Spring
29	UN40190	Breech Block Assembly
30	UN40192	Sear Level Assembly
31	UN20114	Buffer

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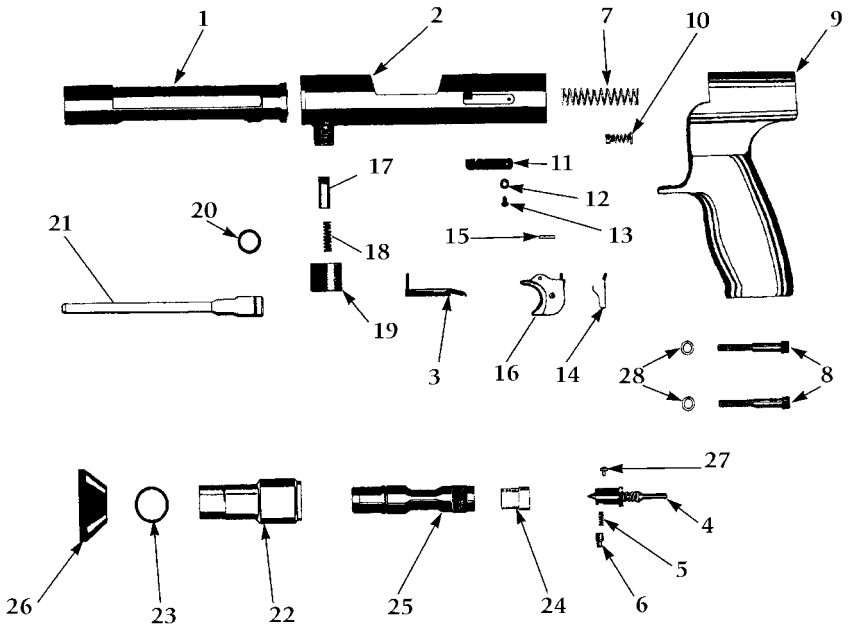
Ramset/Red Head Stud Driver Model 4170

Key No.	Part No.	Description
1	546176	Barrel Assembly
2	546172	Receiver Assembly
3	414100	Cocking Slide Extractor
4	546645	Firing Pin Assembly
5	24039	Firing Pin Pawl Spring
6	24004	Firing Pin Pawl
7	5466391	Firing Pin Spring
8	546624	Handle Screw (2)
9	546647	Handle Assembly
10	414112	Cocking Slide Extractor Spring
11	546609	Barrel Retention Spring
12	546611	Barrel Retention Spring Lock Washer
13	546629	Barrel Retention Spring Screw
14	411470	Trigger Return Spring
15	24009	Trigger Spring
16	539046	Trigger Assembly
17	546621	Pawl
18	329026	Pawl Spring
19	546625	1 Piece Pawl Cap
20	340005	Piston Ring
21	546909	Piston Assembly
22	546179	Muzzle Bushing Shroud
23	546180	Muzzle Bushing Shroud Ret. Ring
24	546444	Buffer
25	546178	Muzzle Bushing
26	546626	Spall Guard
27	539011	Firing Pin Pawl Spring Button
28	1652	Handle Screw Lockwasher (2)



Power Load and Power Fastener Application Information

If power fastener does not penetrate far enough, use next higher lever power load. If power fastener penetrates below the top surface of the item being fastened use next lower level power load. If power fastener goes below the top surface of the material, use penetrating control disc. Power loads and fasteners are also available in individual packs of 25 and boxes of 100.

For fastening this	to this	Power Fastener Length	Power Load Color
Two by fours	Concrete	2 1/2" (SP250)	Green (A22C3)
	Cement Block	2 1/2" (SP250)	Brown (A22C2)
	Steel (3/16" to 1/4" thick)	2 1/2" (SP250)	Yellow (A22C4)
Furring Strips	Concrete	1 1/2" (SP150)	Green (A22C3)
	Cinder Block	1 1/2" (SP150)	Gray (A22C1)
	Cement Block	1 1/2" (SP150)	Brown (A22C2)
	Steel (3/16" to 1/4" thick)	2" (SP200)	Yellow (A22C4)
Electrical junction boxes	Concrete	1" (SP100)	Green (A22C3)
	Cement Block	1" (SP100)	Green (A22C3)
	Steel	1" (SP100)	Yellow (A22C4)
Conduit clips	Concrete	3/4" (SP75)	Brown (A22C2)
	Cement Block	3/4" (SP75)	Brown (A22C2)
	Cinder Block	3/4" (SP75)	Gray (A22C1)
	Steel	3/4" (SP75)	Green (A22C3)
Shutters & awnings	Brick Horizontal mortar joint	1 1/2" (SP150)	Gray (A22C1)
	Cement Block	1 1/2" (SP150)	Brown (A22C2)
	Concrete	1 1/2" (SP150)	Green (A22C3)
Shelf brackets	Concrete	1" (SP100)	Green (A22C3)
	Cement Block	1" (SP100)	Brown (A22C2)
	Cinder Block	1" (SP100)	Gray (A22C1)
1/4" Plywood or pegboard	Concrete	1 1/4" (SP125)	Yellow (A22C4)
	Cement Block	1 1/4" (SP125)	Yellow (A22C4)

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Fax Order Form - 800-255-7985

Bill To: _____

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Ship To: _____

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_____

Name of person placing order _____

Customer phone no. _____

Date of order _____

PO Number _____

Ship:

UPS/Truck _____

Pick-Up _____

QUANTITY	PART NO.	DESCRIPTION	PRICE

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PHP Credit Application (Tech Cat.)

Company Name: _____ Phone:A/C _____

Billing Address: _____ Fax No. _____

_____ Purchasing Agent _____

_____ Accounts Payable _____

Ownership Type:__Corporation __Partnership __Sole Proprietor __Other How long at location?_____yrs

TYPE OF COMPANY:
(What business are you in?)
Please circle all that apply.

1. Contractor Supply
2. Rental Store
3. Ag/Farm Supply
4. Lumber Yard
5. Concrete-Redi Mix
6. Lawn & Garden
7. Hardware
8. Small Engine Repair
9. Electric Motor
10. HVAC
11. STAFDA
12. Other_____
14. Propane Dealer
15. Electric Wholesaler
99. Contractor

If corporation: Legal Name _____

State of Incorporation _____ Date of Incorporation: _____

Registered Agent's Name _____

Registered Agent's Address _____

City, State, Zip _____

BANK REFERENCES:

Name _____ Phone No. _____

Street Address _____ City,State, Zip _____

Savings Account No. _____ Checking Account No _____

SUPPLIER REFERENCES: (To help expedite, please include supplier FAX number and your account number with them.)

(1) Name _____ Phone: A/C _____- _____

Address _____ Fax # _____

City, State , Zip _____ Acct.#/Contact _____

(2) Name _____ Phone: A/C _____-_____

Address _____ Fax # _____

City, State , Zip _____ Acct.#/Contact _____

Please sign below, so that we have permission to gather credit information about your company.

In support of this application, PHP is hereby authorized to obtain credit and/or financial information from my/our bank(s), other financial institutions or commercial firms with whom I/we have done business. It is understood that any such credit and/or financial information will be held in strict confidence and used only in consideration of this application.

Upon approval of this application, it is agreed that all purchases will be paid in full and in accordance with the terms of sale as stated on PHP invoice(s). Should I/we not pay PHP according to terms, it is understood that credit privileges may be withdrawn. Should PHP find it necessary to obtain assistance in collecting any past due balance, I/we agree to pay interest at the rate of 1.5% per month (or such other rate allowable by State law), reasonable attorney fees, collection fees, and/or court costs allowable by law. A copy of this statement and application has been received.

Company Name _____ Authorized Signature _____

Telephone _____ Title _____

Personal Guaranty of Indebtedness: If you have been in business less than 2 years, please sign this.

The undersigned Guarantor(s), in order to induce PHP to extend credit to applicant herein, and in consideration thereof, does hereby unconditionally, personally, and individually guarantee all sums which may be owed by applicant to PHP arising out of sale of products by PHP to said applicant, whether said indebtedness is due now or hereinafter occurred. This Guaranty is continuing, and shall continue to apply to all indebtedness which applicant may hereinafter incur, renew, or extend whole or in part, with PHP, all without notice to the undersigned Guarantor (s). The Guarantor(s) agrees to pay all costs and expenses, including reasonable attorney fees, which PHP incurs in the collection of any indebtedness from the Guarantor(s) covered by this agreement, or in the collection of any liability of the guarantor(s) hereunder. Notice of acceptance of this Guaranty is hereby waived; notice of any and all indebtedness guaranteed hereunder is expressly waived. The Guaranty is delivered and shall be deemed to have been made in and shall be governed and construed pursuant to the laws of the State of Indiana.

State of _____ County of _____ Signed this _____ day of _____, 20_____.

Subscribed and sworn to before me this _____ day of _____20__ Guarantor _____

Notary Public _____ Guarantor _____

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How to Service Portable Heaters

PHP Service School

Dates: Two separate schools are offered each year. Typically held in the fall. (Call for confirmation)

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Place: Harold Coates Education Facility located at PHP in Valparaiso, IN

Cost: Call for current rates.

Your service school fee includes:

- **Two days of intense instruction**
- **Instructional materials**
- **Catered lunch both days**
- **Dinner on the first evening**
- **Hotel room**
- **CD Rom**

Gold Key Customers get special rates...call for details at 800-362-6951.

❑ Yes, we would like to sign up for the two day service school.

Company Name_____

Your Name _____ P.O. #_____

Phone _____ Fax # _____

I will be attending on October _____

Attendee Names_____

_____

❑ No, I don't want to sign up at this time, but please fax additional information to _____ (fax number).

Don't miss this great opportunity to get top notch training from the experts at PHP.

Don't delay, sign up now!

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2. Earn these benefits. . .It's that simple!

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Winter Program valid from October 1, through March 31.

Minimum Order	$750-$1499	$1500-$2999	$3000 $5999	$6000 +
Terms	2 Equal Payments	3 Equal Payments	4 Equal Payments	5 Equal Payments
Freight	Prepaid & Add	Prepaid & Add	Allowed*	Allowed*
Pricing	Dealer	Gold Key**	Gold Key**	Gold Key**

***Freight Allowed** - Applies to any order of $3,000 or more (not including tax, freight or handling fees). You will be charged freight but may deduct it from the (final) invoice if paid within terms of program level at time of purchase. Continental U.S. only .

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Our state-of-the-art call center is staffed by knowledgeable customer service representatives! Our CSR's attend product education courses specifically designed to help you make informed purchasing decisions.

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We understand how frustrating it can be when something doesn't work and you need it fixed yesterday. Our highly trained technical service team is always ready to answer any questions you have to help you get your equipment back in working order FAST.

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